



PortMiami Tunnel

Bringing Art Back to Infrastructure

Elaine Mills, PLA LEED AP

ArquitectonicaGEO

A CELEBRATION OF COLLABORATION

WHAT IS THE TUNNEL?

WHO IS IT FOR?

WHAT WAS OUR ROLE?

SITE

STRUCTURE

INTERIOR

WHY DOES IT MATTER?

WHO WERE OUR PARTNERS?

WHAT IS THE TUNNEL?

- **Twin tunnels: 4,200-ft-long, 43-ft-diameter beneath Miami's Government Cut shipping channel**
- **80-ft tall portals and support buildings on two islands**
- **711 ft of depressed approach roads**
- **More than one mile of circulation roads**
- **Six acres of landscape**

A design-build-finance-operate-and-maintain (DBFOM) Public Private Partnership (PPP)

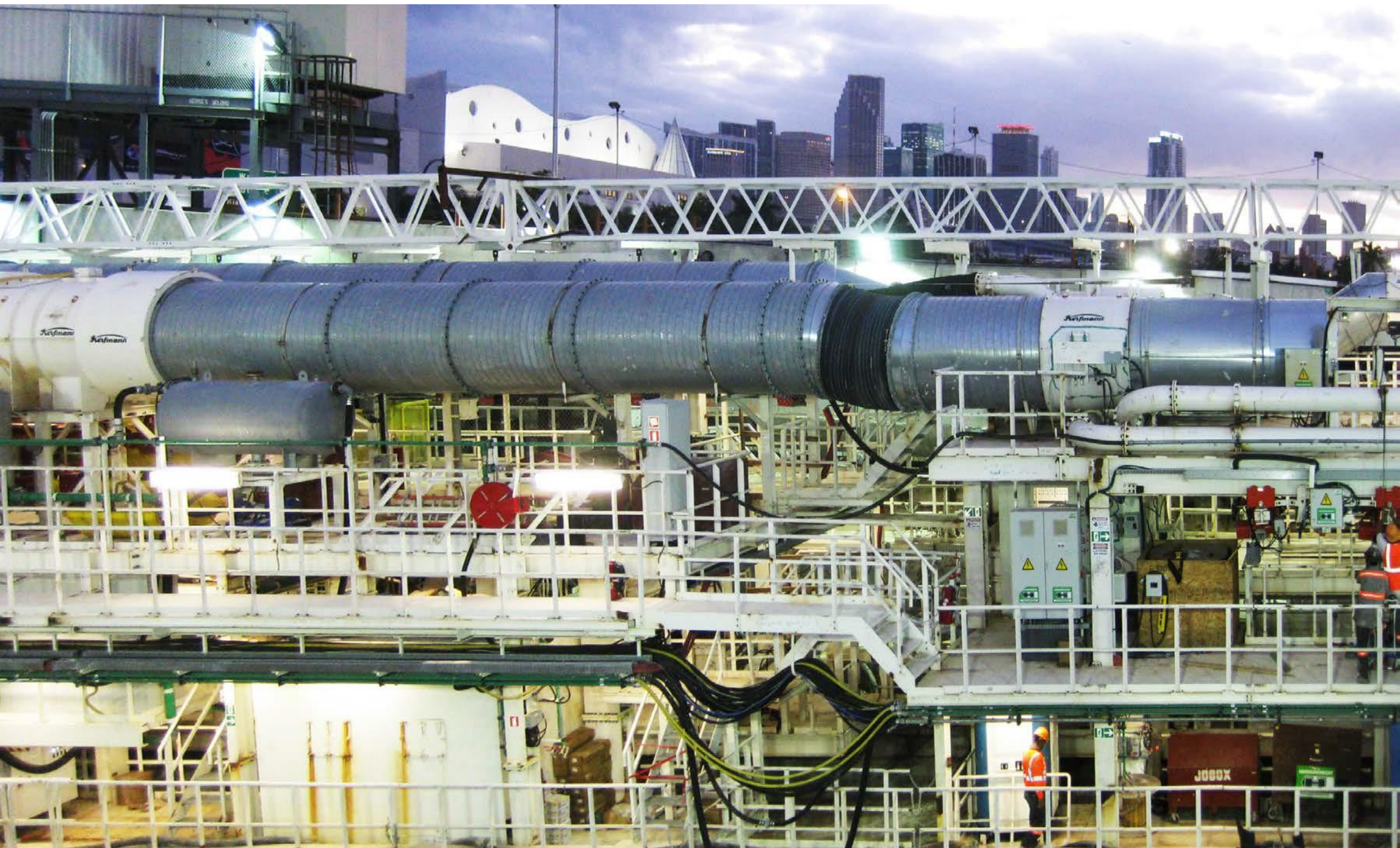
Public: FDOT, Miami-Dade County and the City of Miami

Private MAT Concessionaire: Meridiam Infrastructure and Bouygues Travaux Publics

Design-Build Contractor: Bouygues Civil Works Florida



30 years in planning, over 3 years in construction, Substantial Completion May 2014



January 2012

ARQUITECTONICA **GEO**



freight



cruise



art basel

WHAT IS THE TUNNEL? WHO IS A VERY PUBLIC PROCESS

**The Transportation Aesthetics Review Committee
(TARC) & Metropolitan Planning Organization (MPO):**

**“Pushing the standard parameters of materials, sites,
and design excellence.”**



July 2012

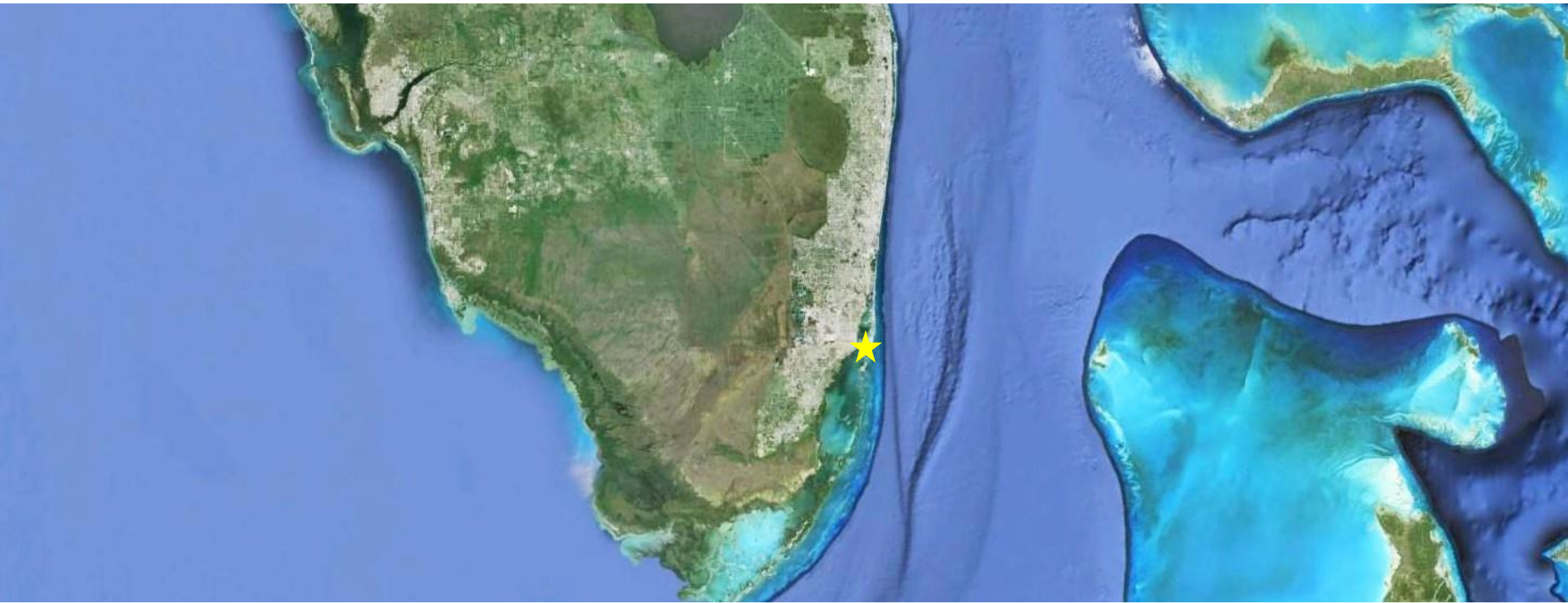


July 2014

NAVIGAT
SITES
STRUCTURES
INTERIOR
WHY DOES IT MATTER?

[illegible]

VNI









site context



Perez Art Museum



Frost Science Museum



Parrot Jungle Island

natural context

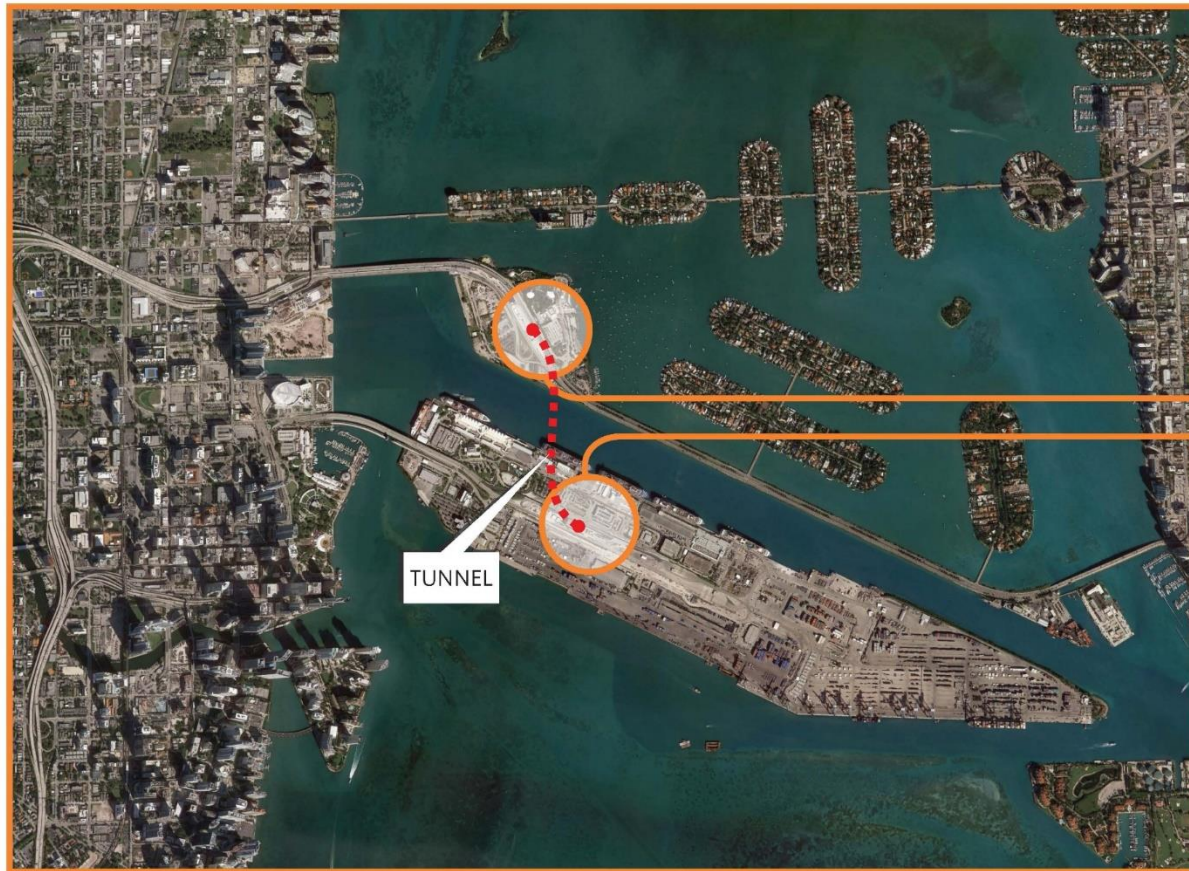








site constraints



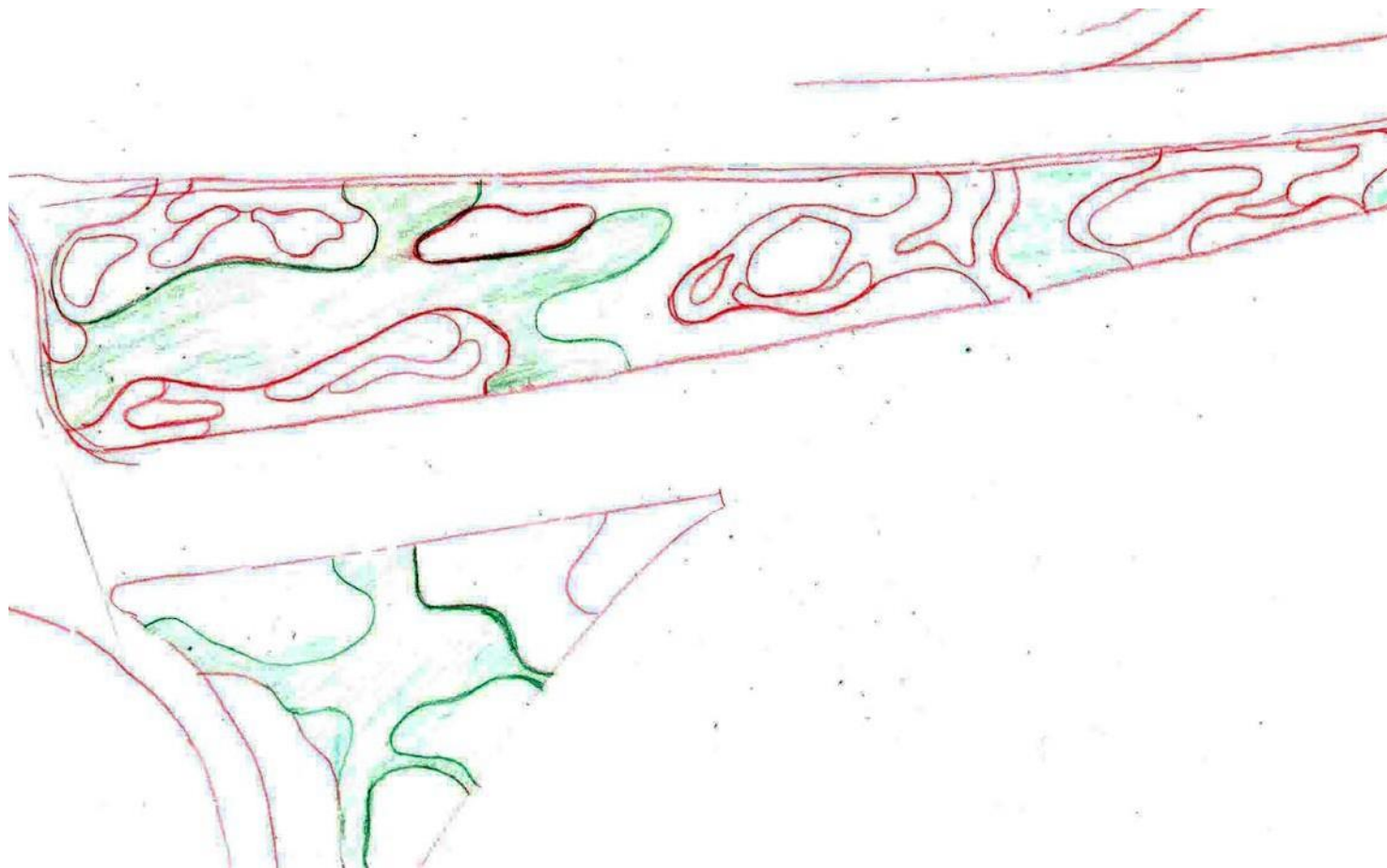
WATSON ISLAND



DODGE ISLAND



establishing forms



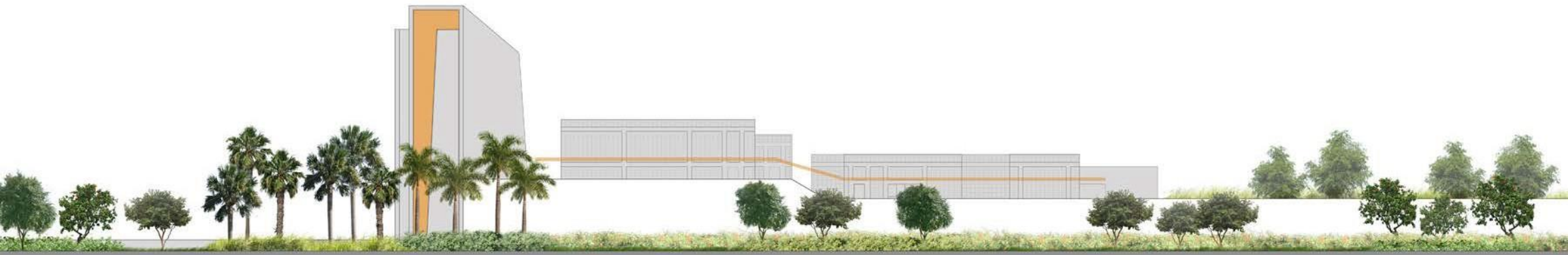
planting layout



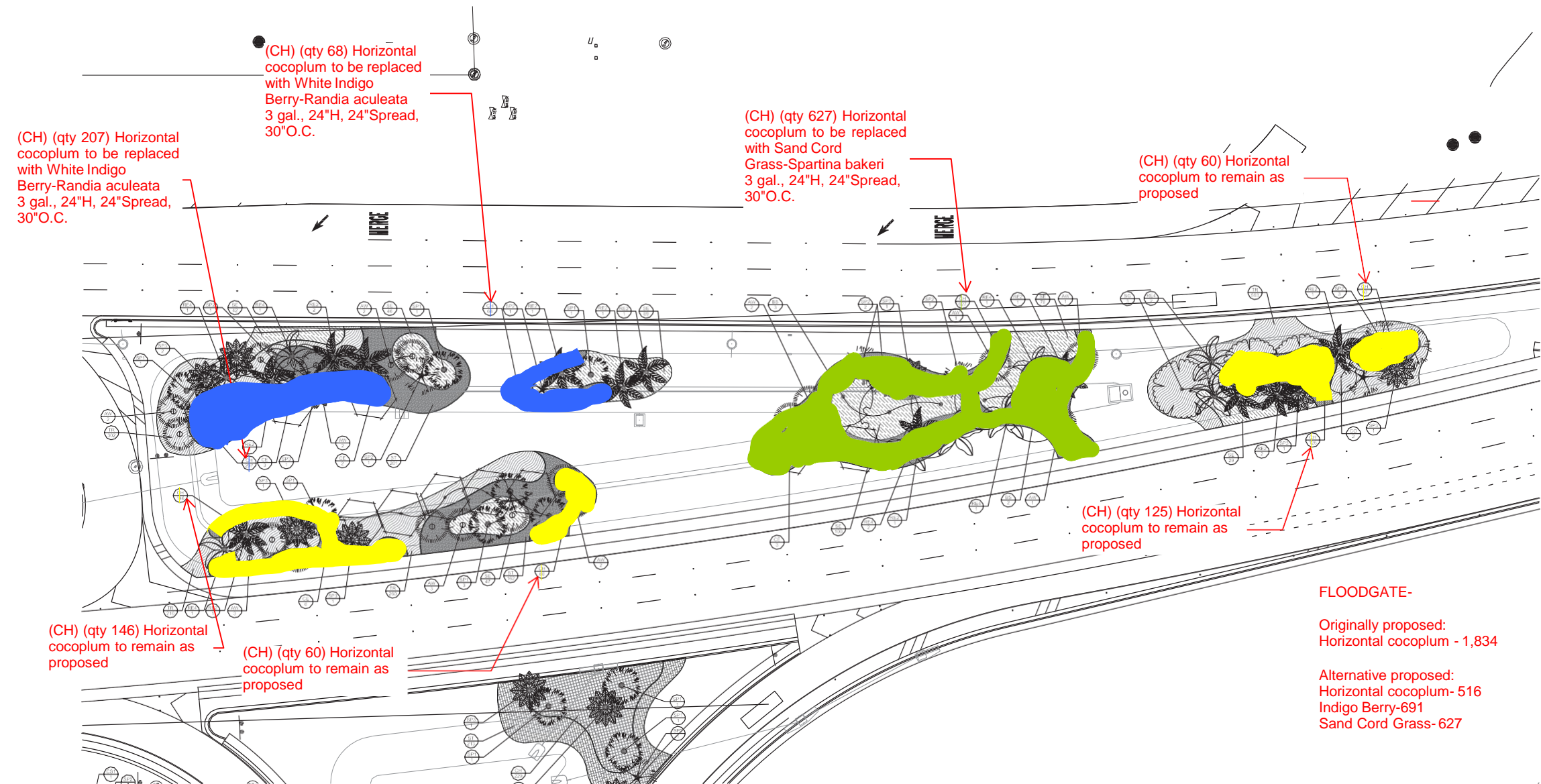
© 2007



elevation study



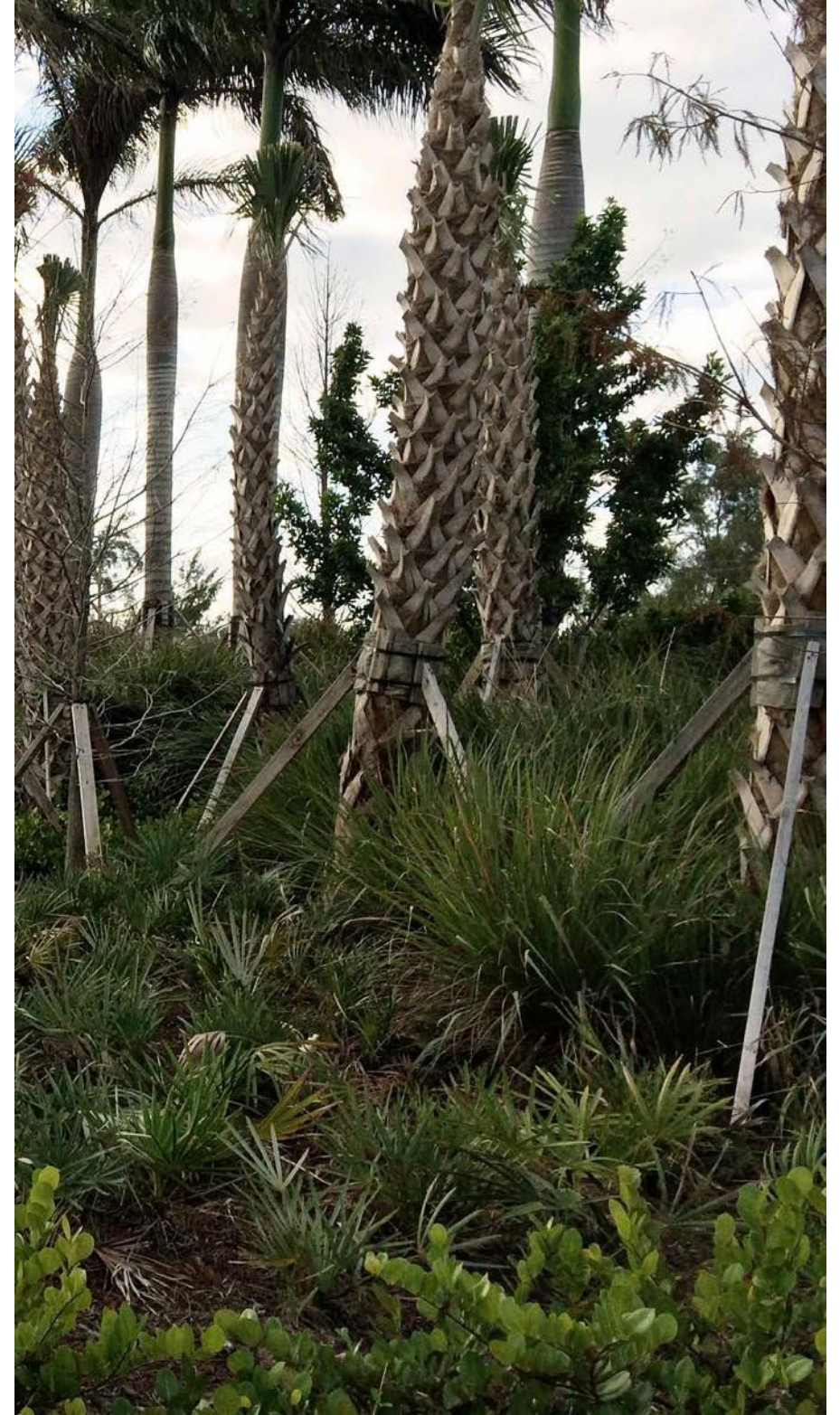
adjusting the plan



installation







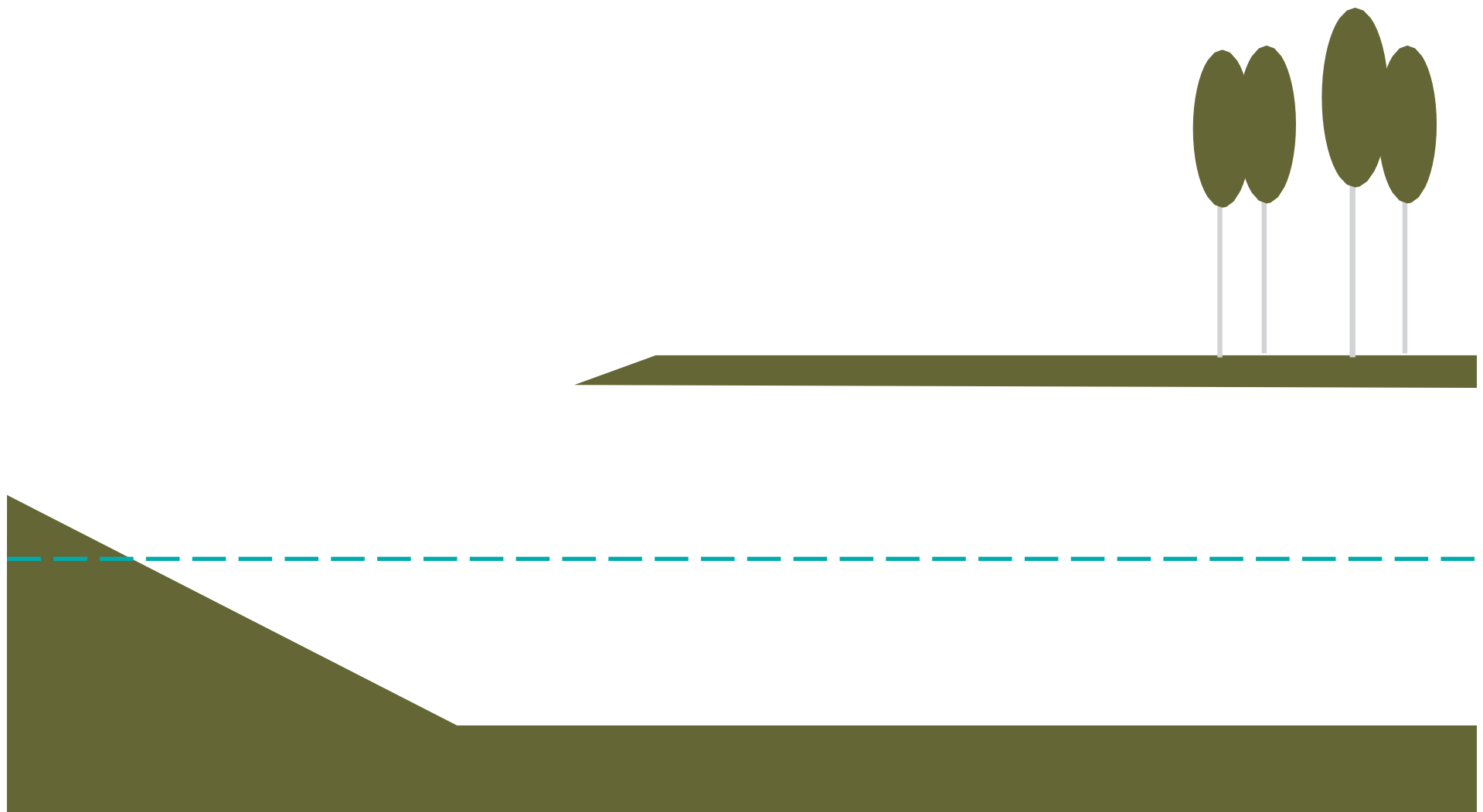


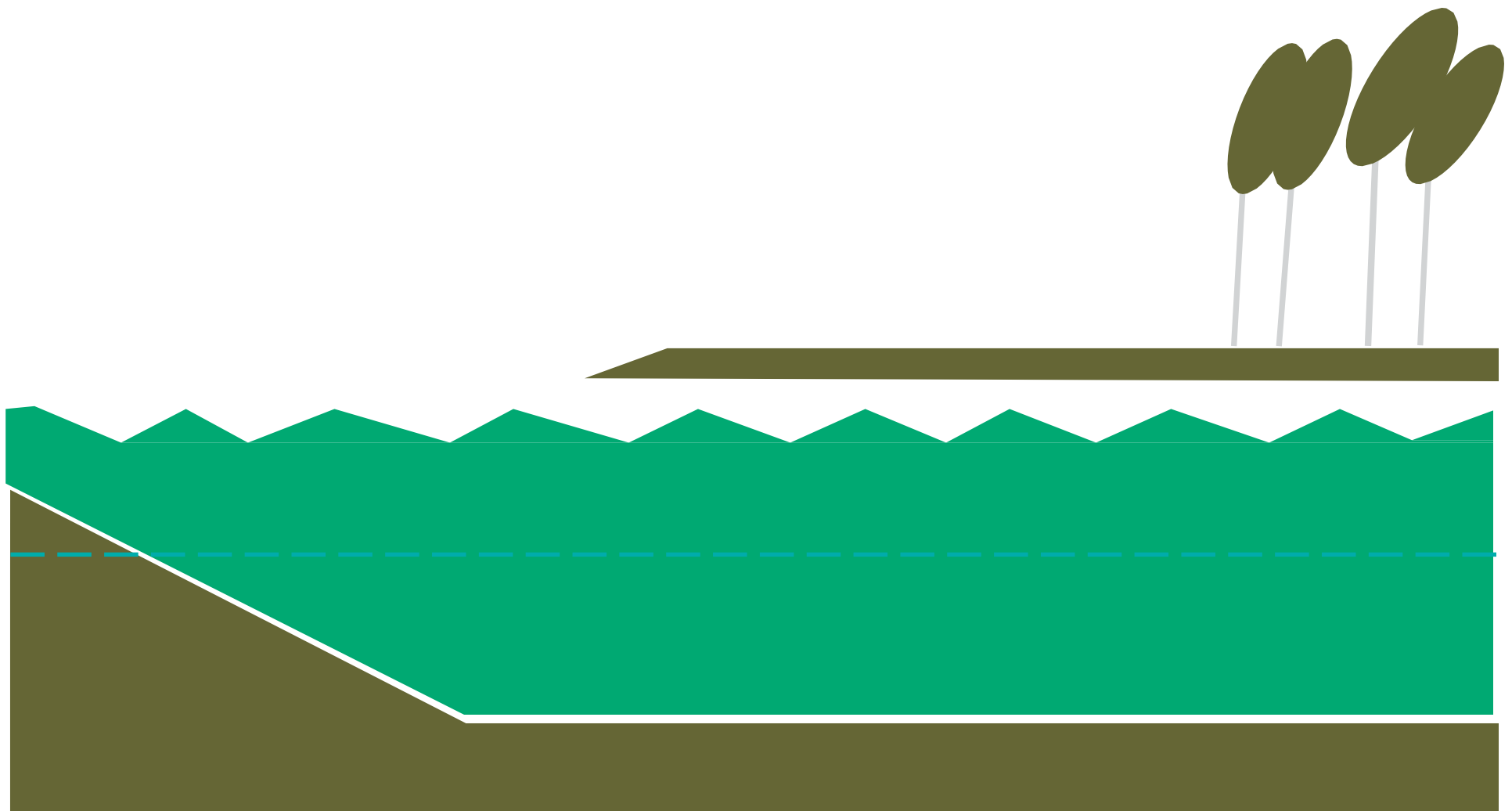


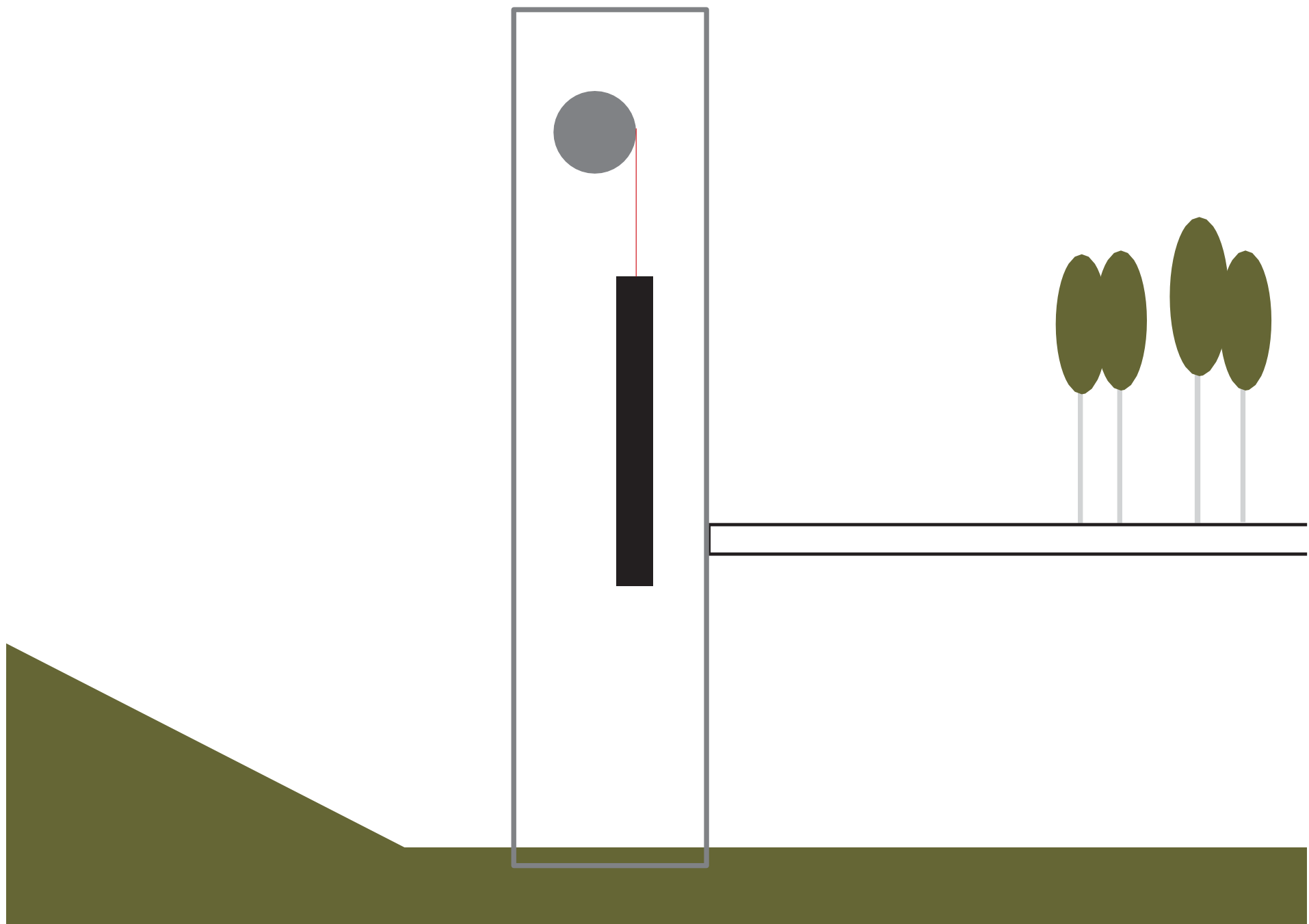


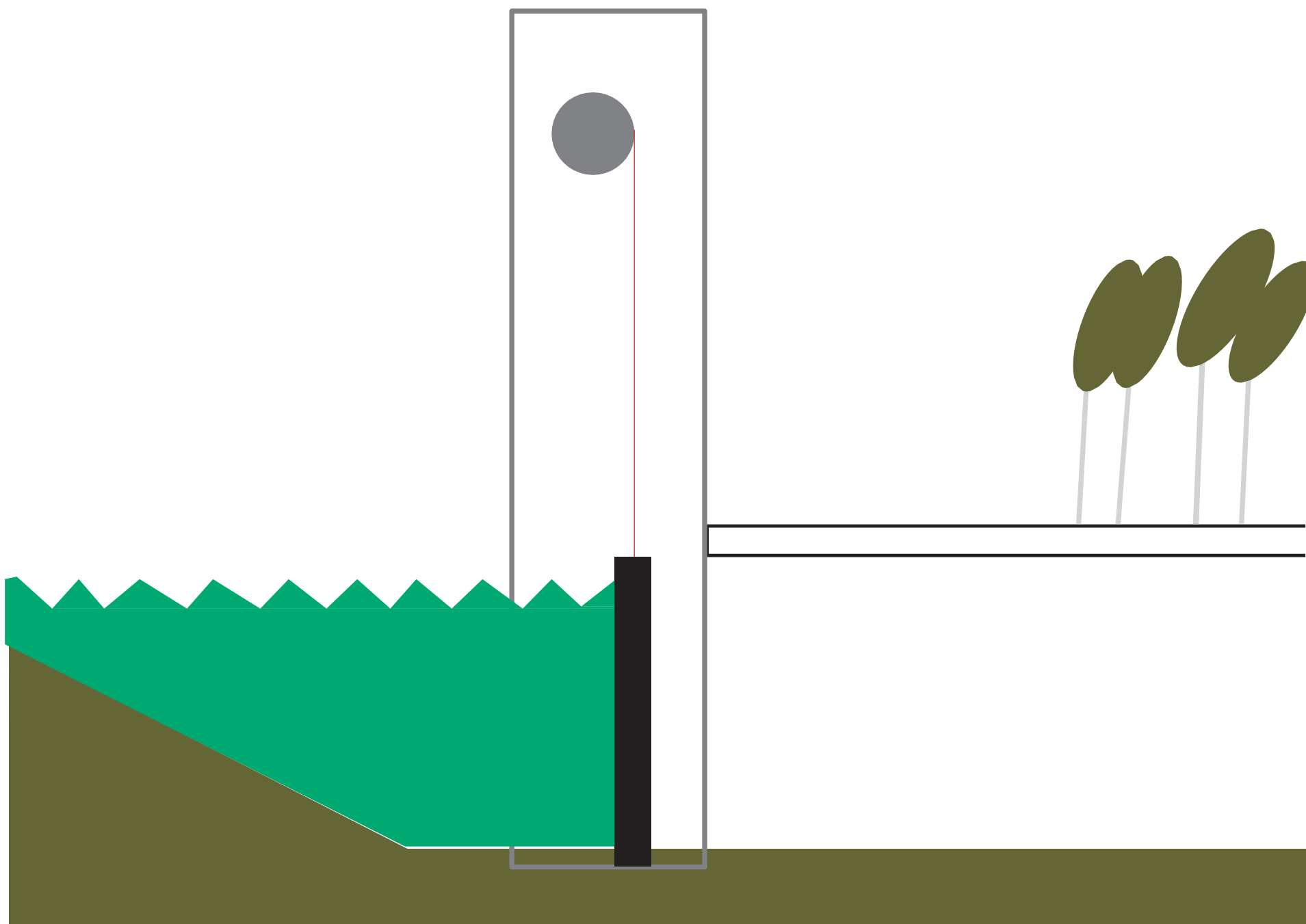
why floodgates?





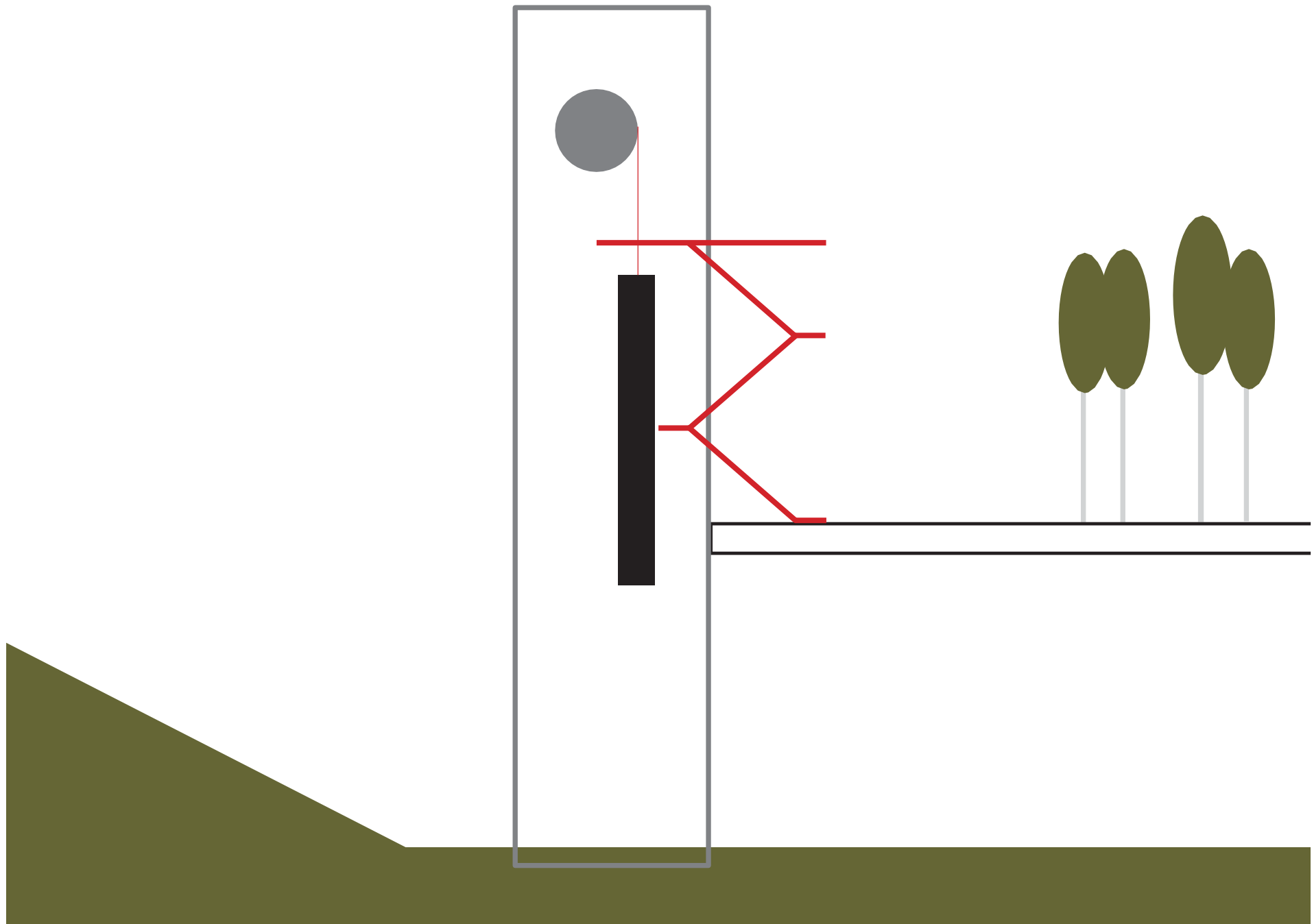


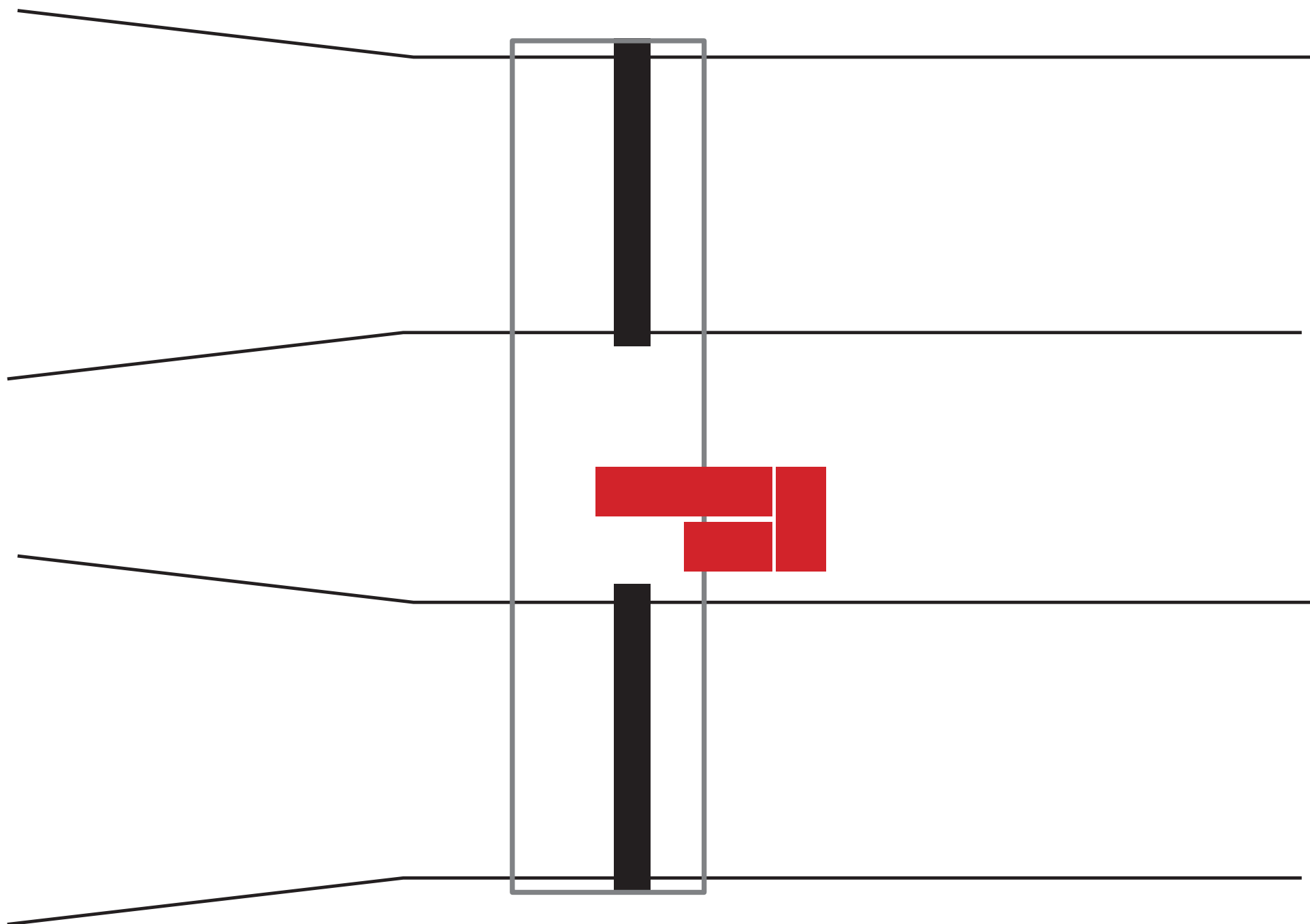


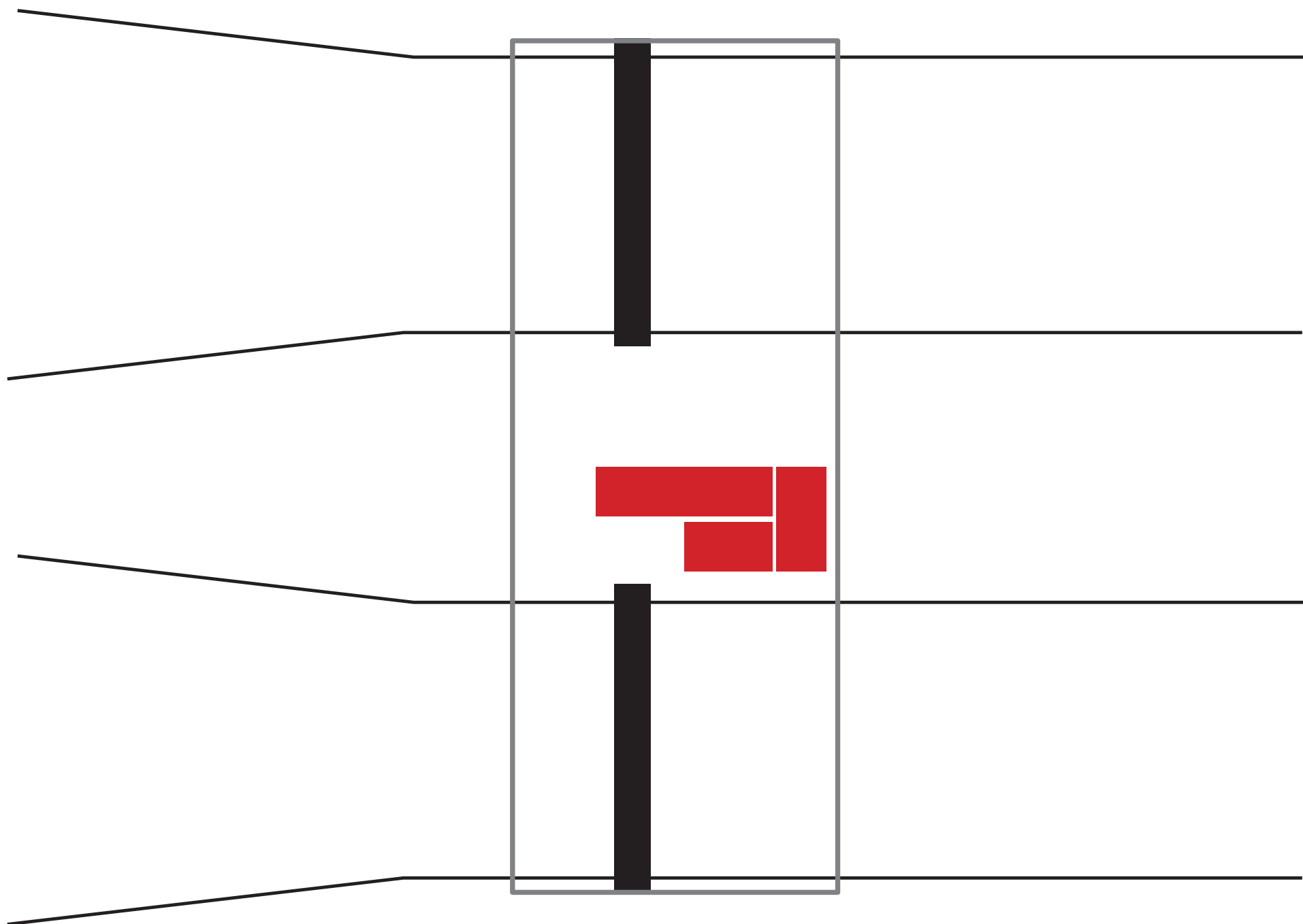


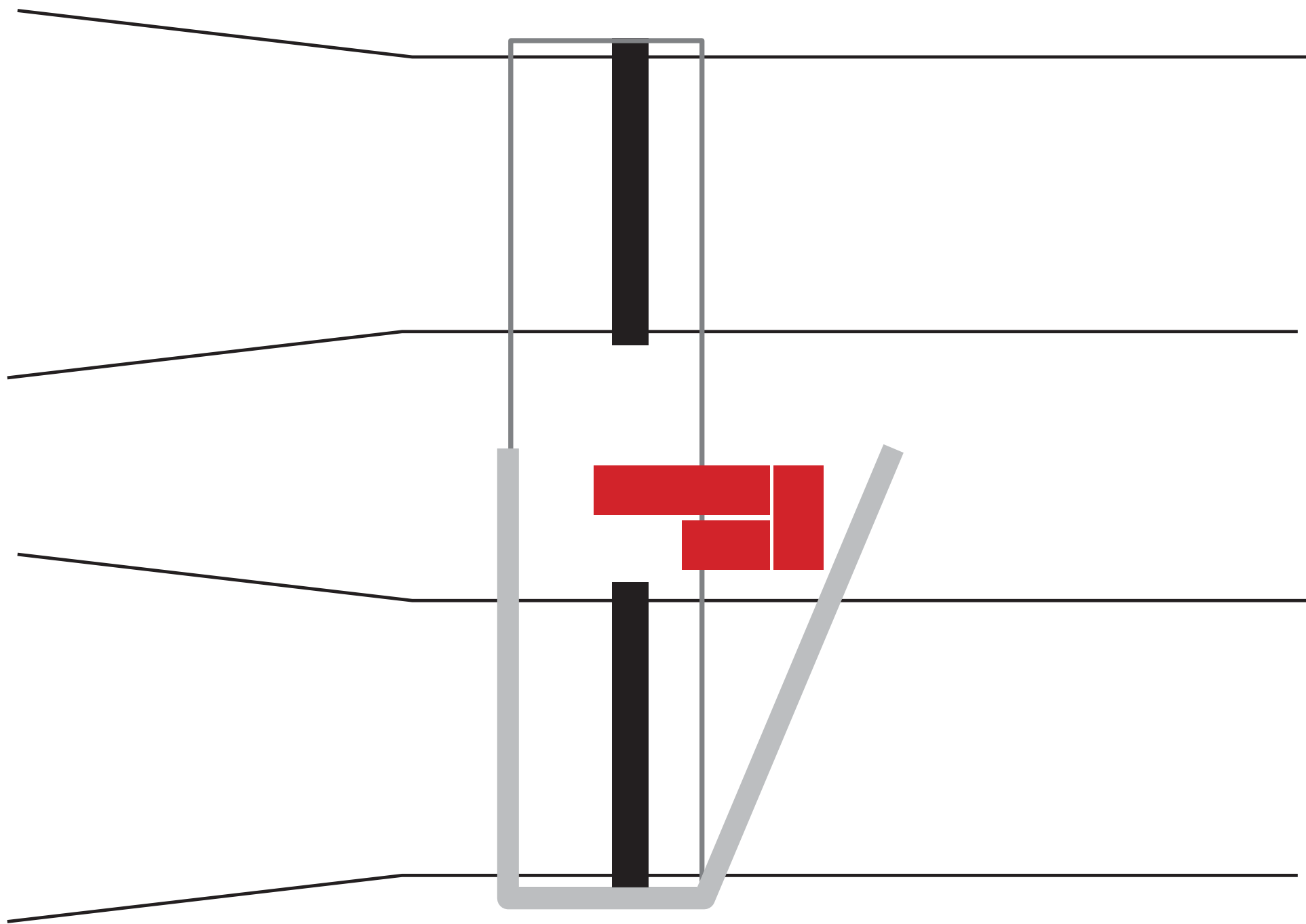


form







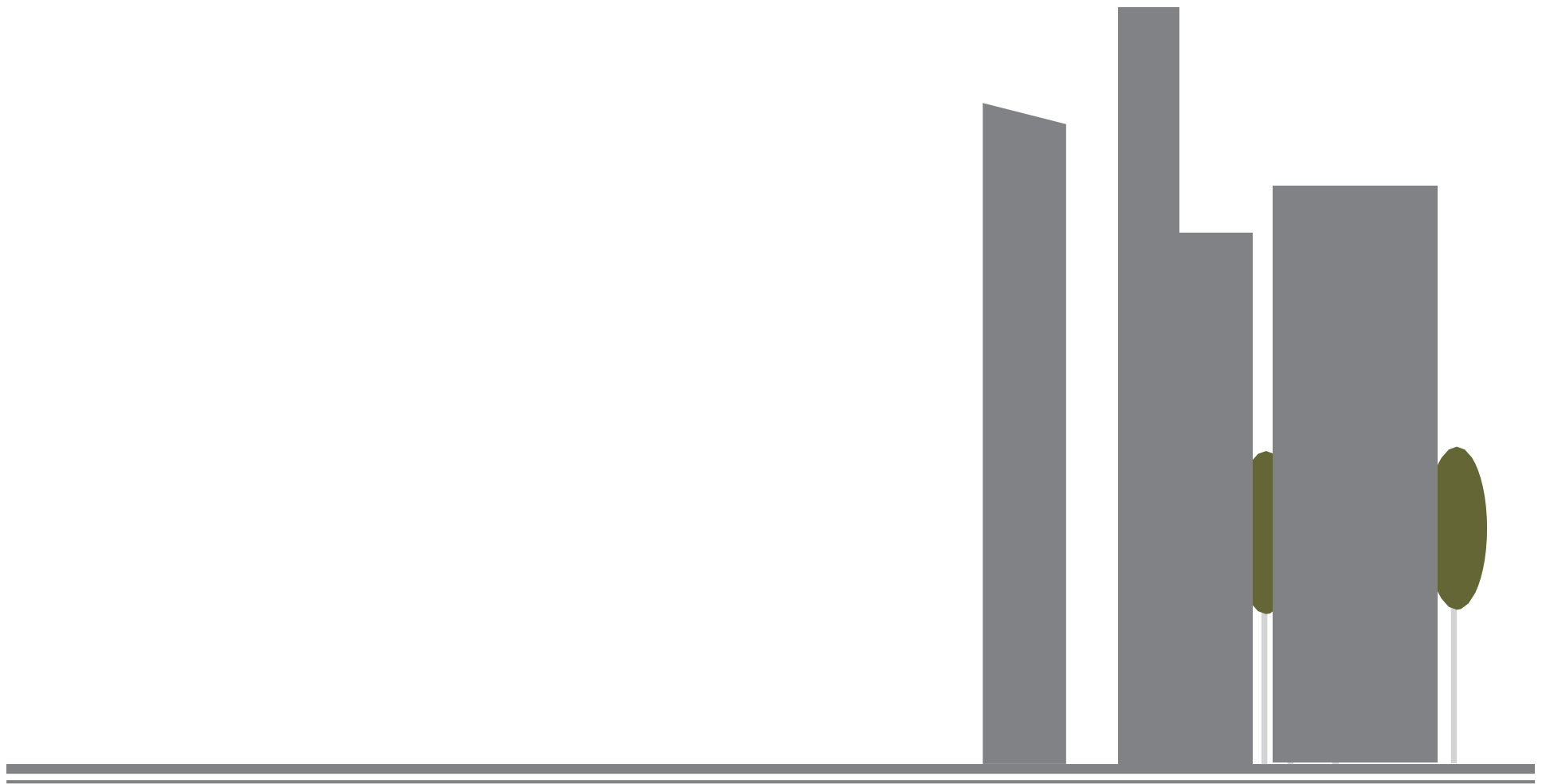


narrative



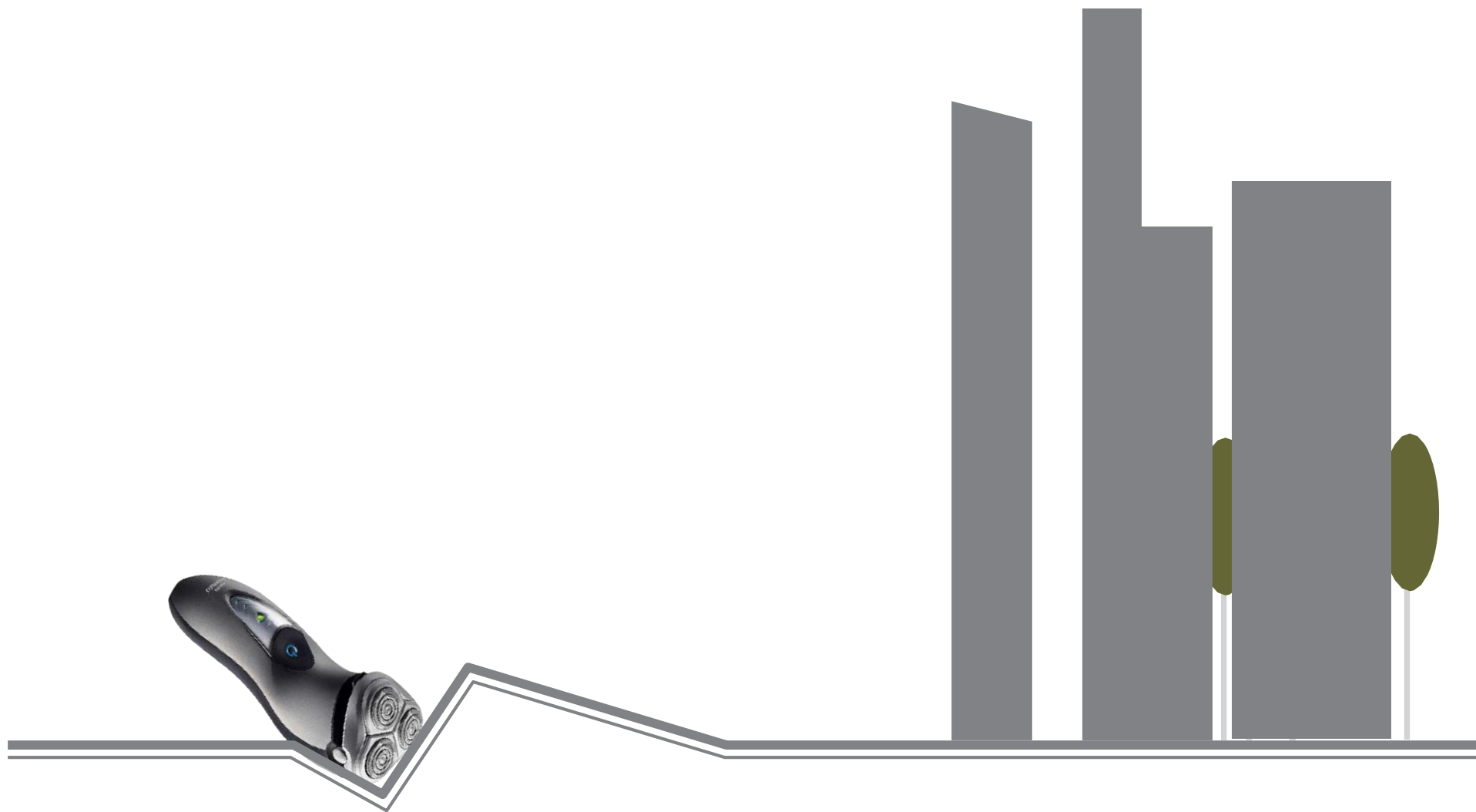
Florida 1907

Florida East Coast Railway



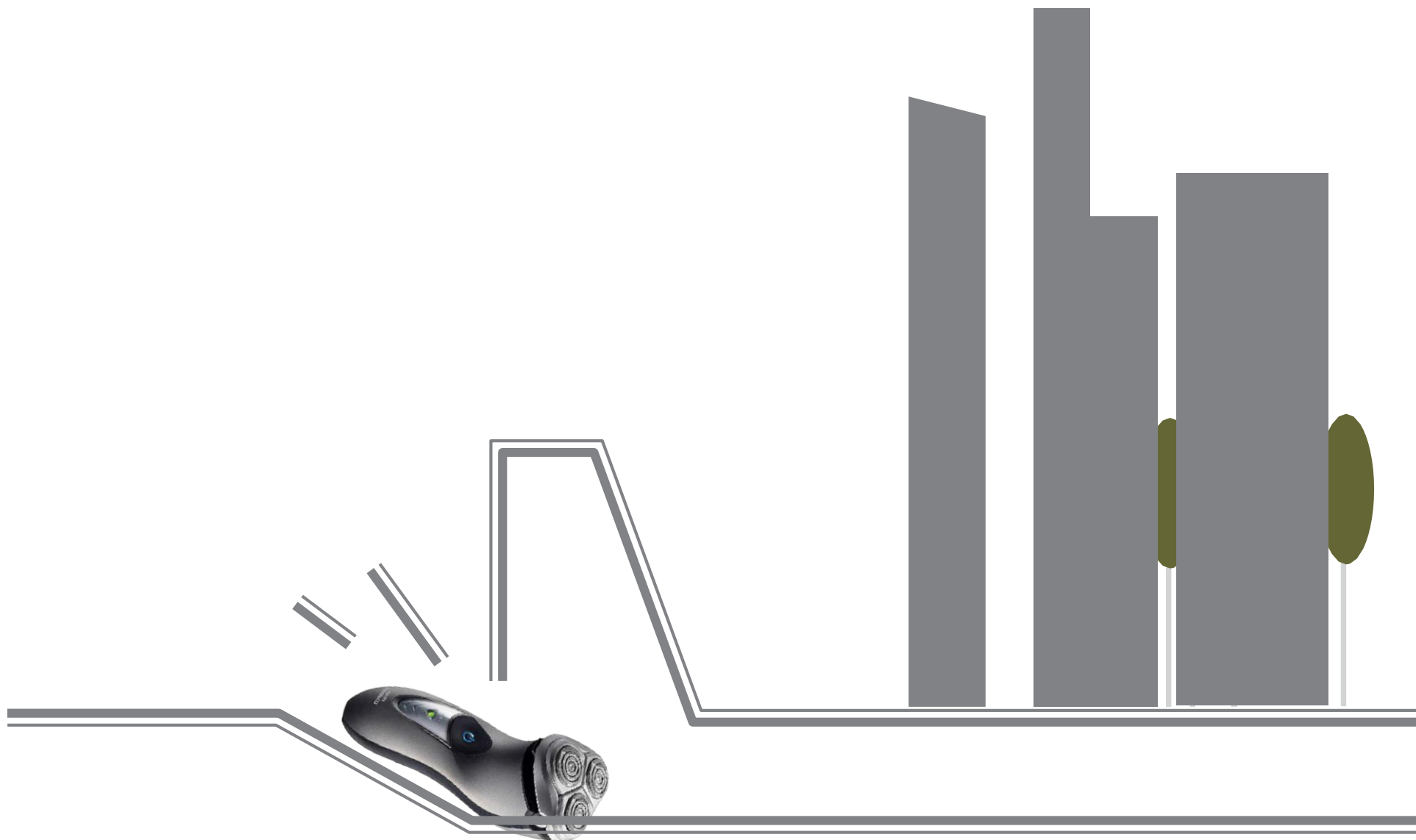
Miami 2012

MacArthur Causeway

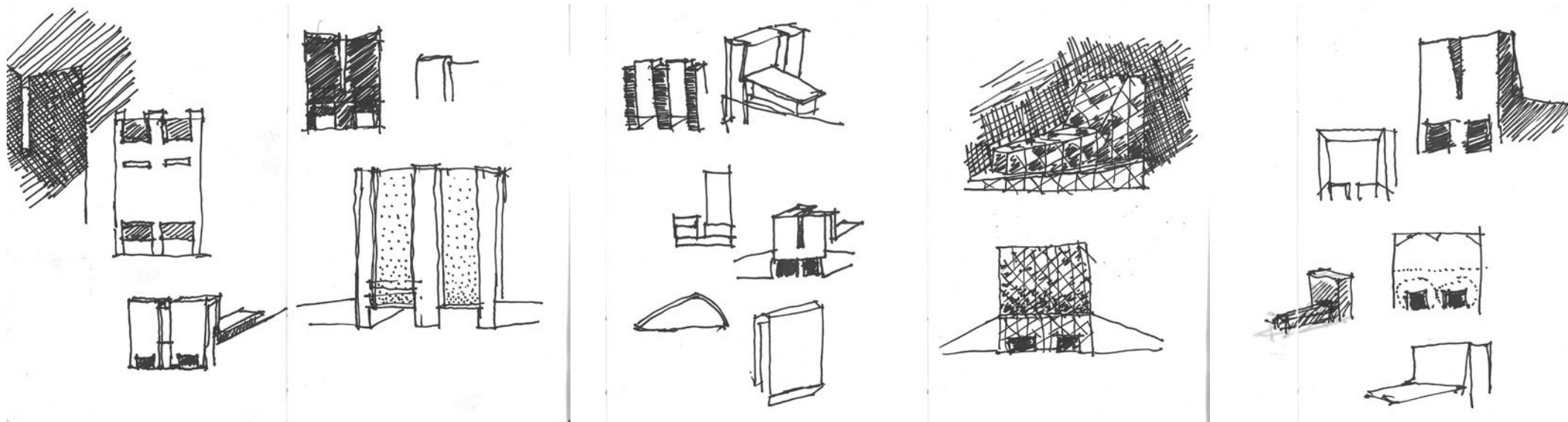


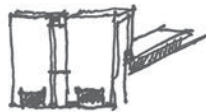
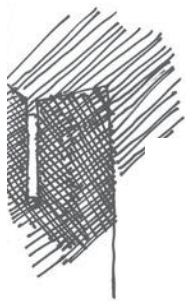
Miami 2012

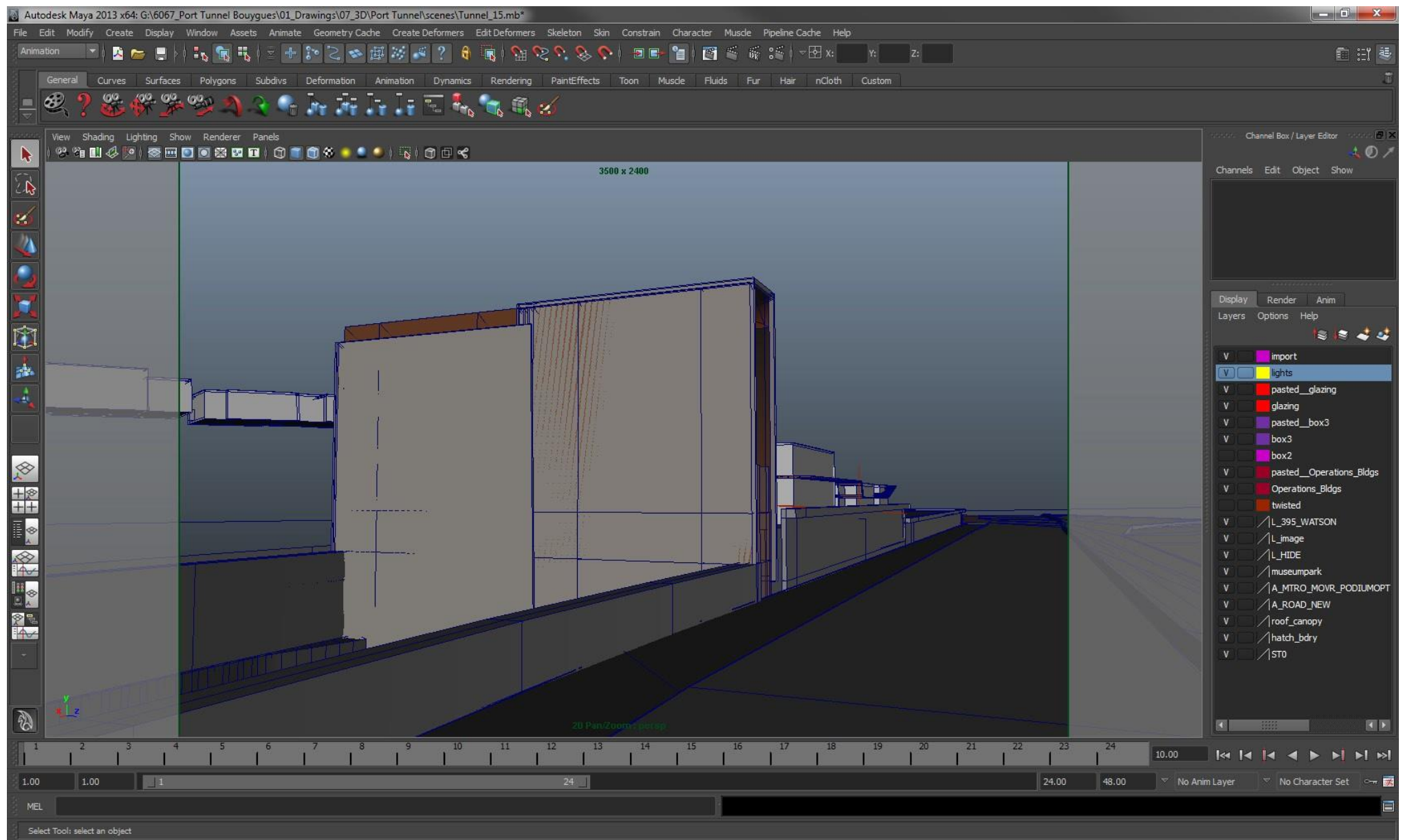
Enter Harriet



Port Tunnel





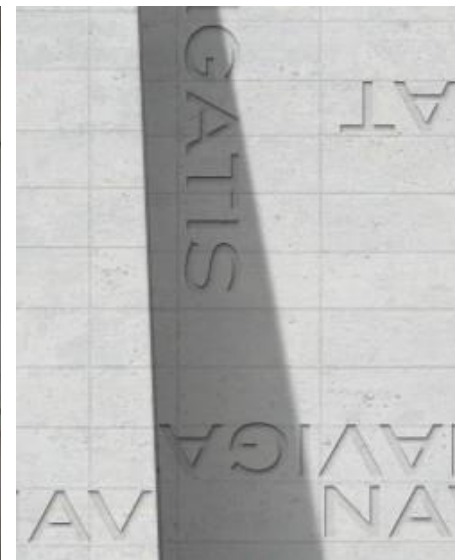




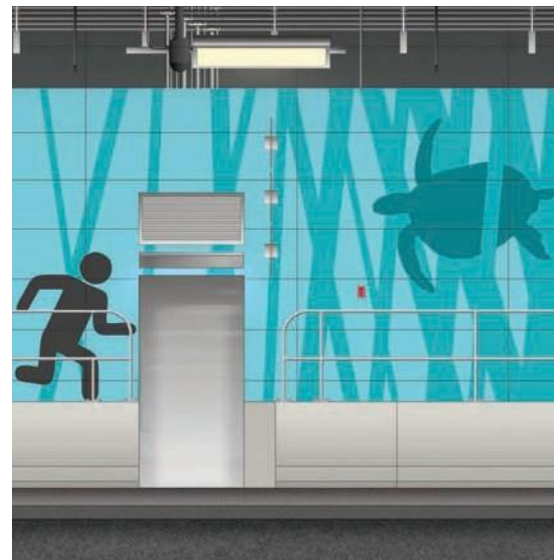
material



landscape



concrete

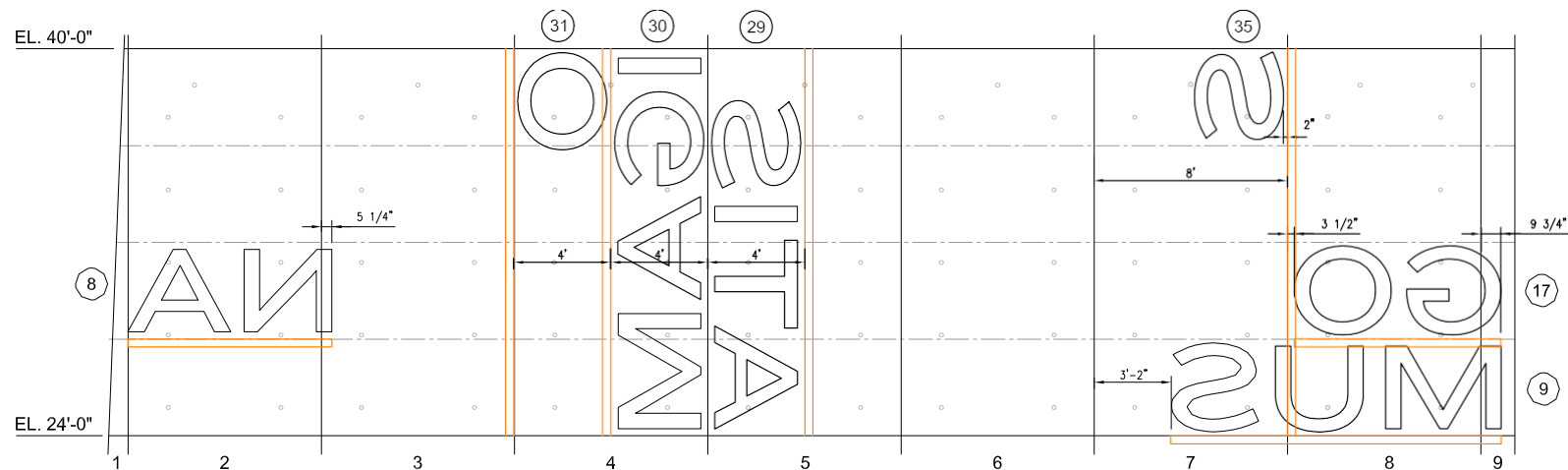


metal

scale







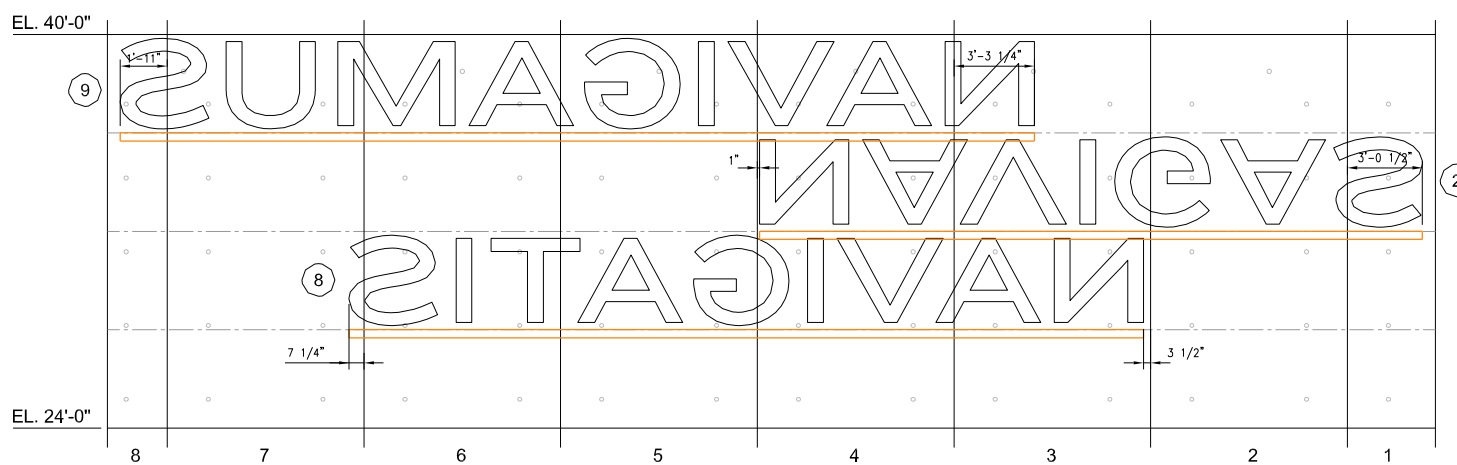
FRONT WALL 1B
(EL: 24'-0" - 40'-0")

LEGEND:

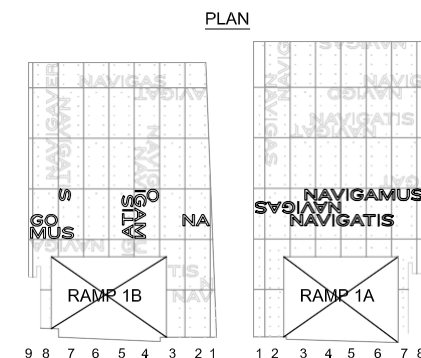
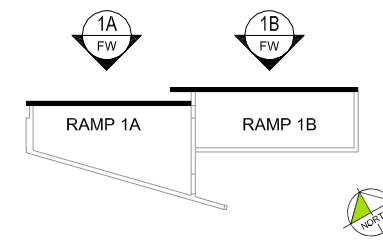
- (20) LINE NUMBER
- 4" TIMBER

NOTE:



FOR LINE NUMBER REFER TO
POMT-BF-DW-8300-00009



FRONT WALL 1A
(EL: 24'-0" - 40'-0")



ELEVATION
WATSON FORM LOCATION PLAN

REVISIONS		 	PREPARED BY:	HNE	STATUS: <div>FOR REVIEW</div>	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			PORT OF MIAMI TUNNEL PROJECT WATSON PORTAL STRUCTURES FLOODGATE ENCLOSURE		SHEET NO.
DATE	DESCRIPTION		CHECKED BY:	CFE		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	2 of 12		
6/27/13	00: FIRST ISSUE		APPROVED BY:	CFE		A1A	MIAMI-DADE	251156-3-52-01			
		POINT-BE-DW-8300-00037-00-MET		May 23, 2013		DETAILED LIFT PLAN					





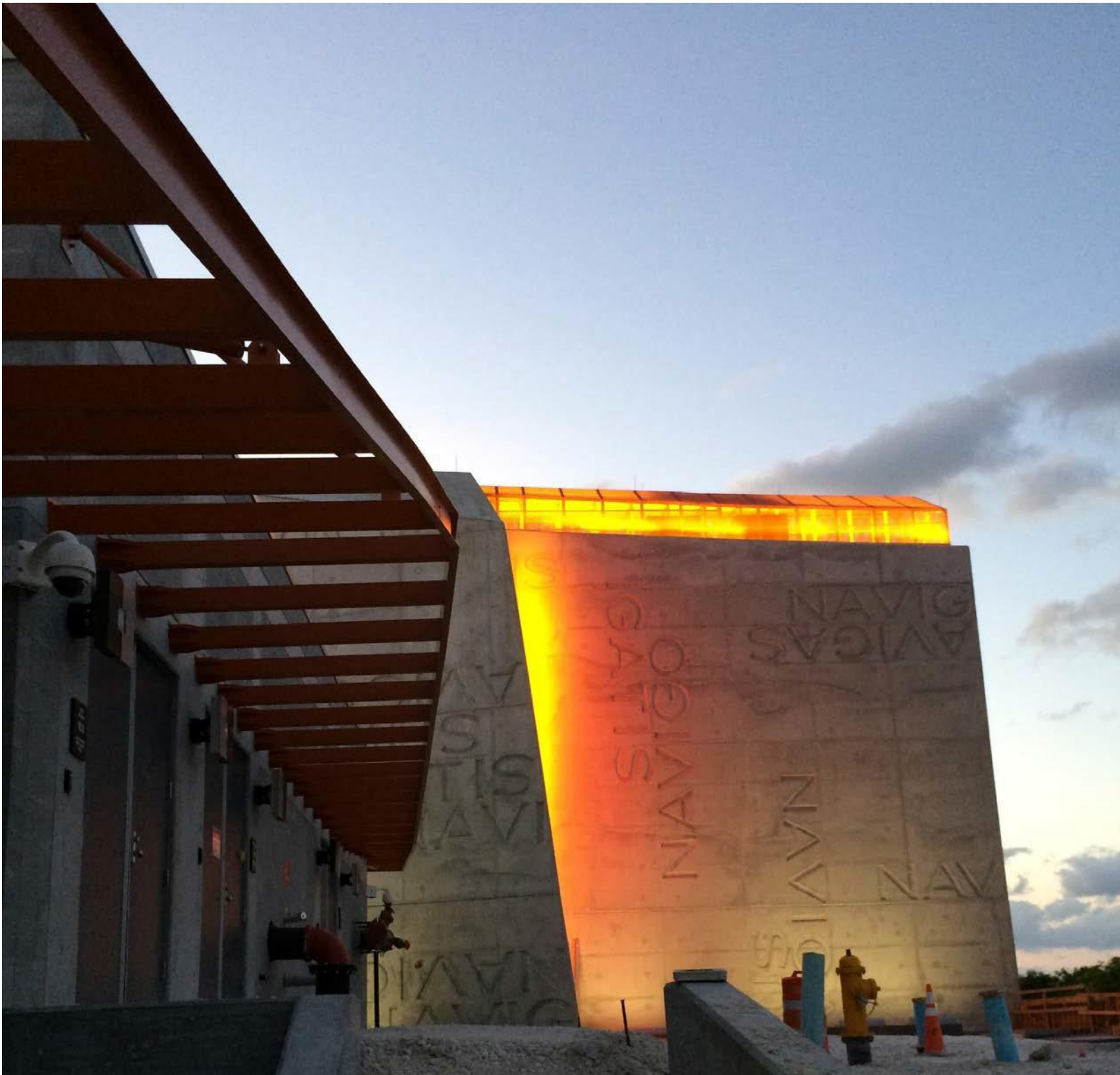




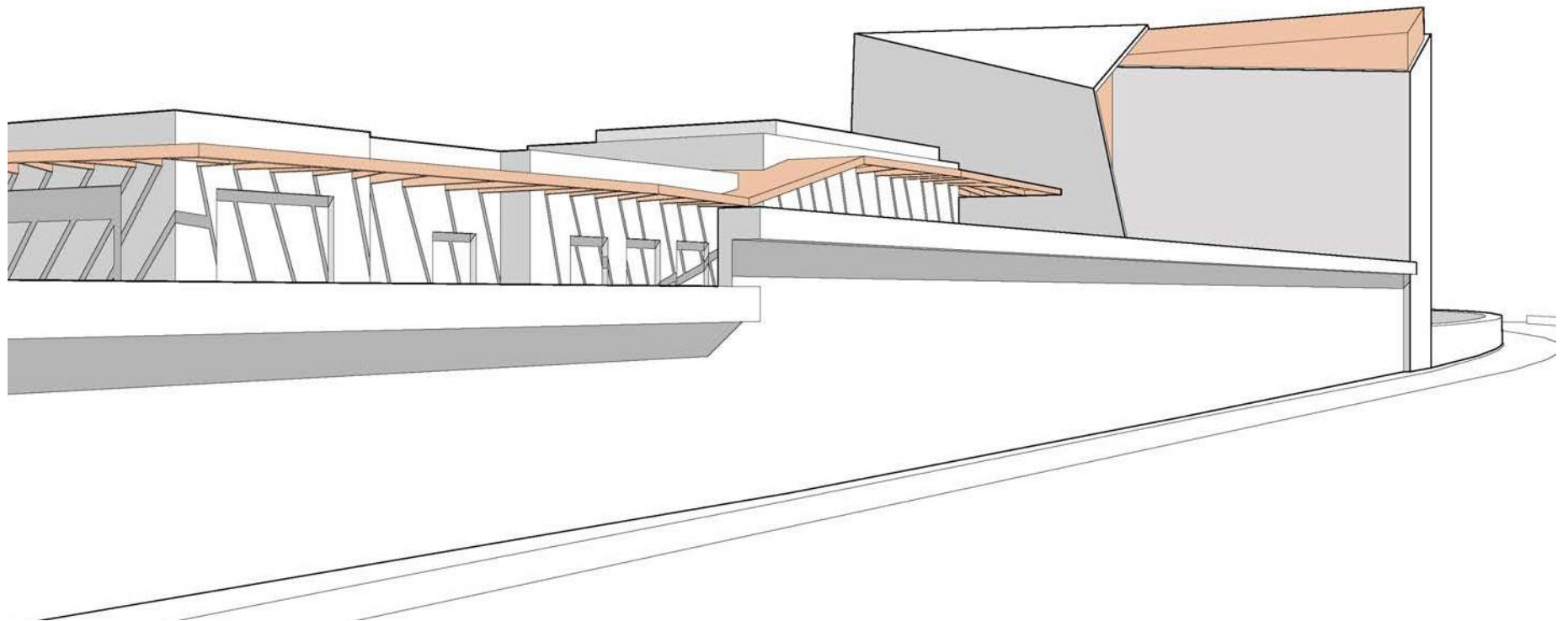
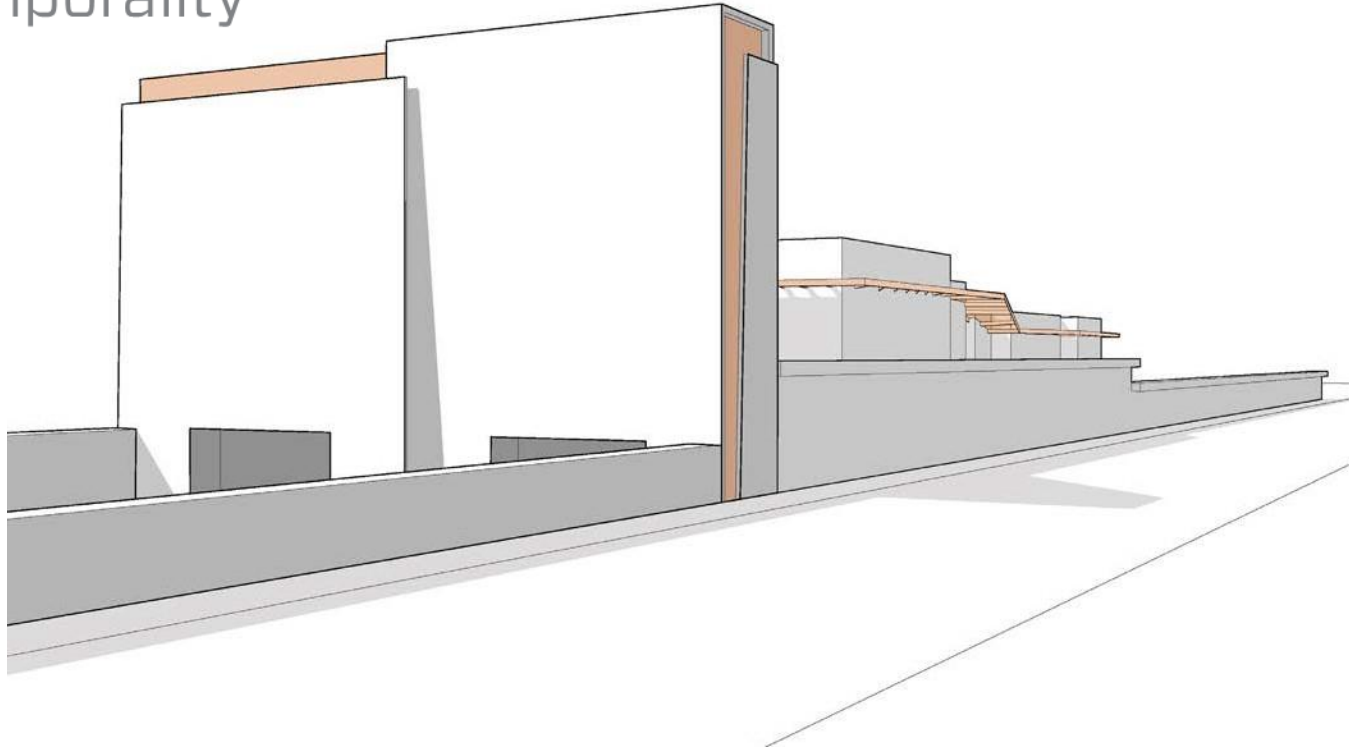


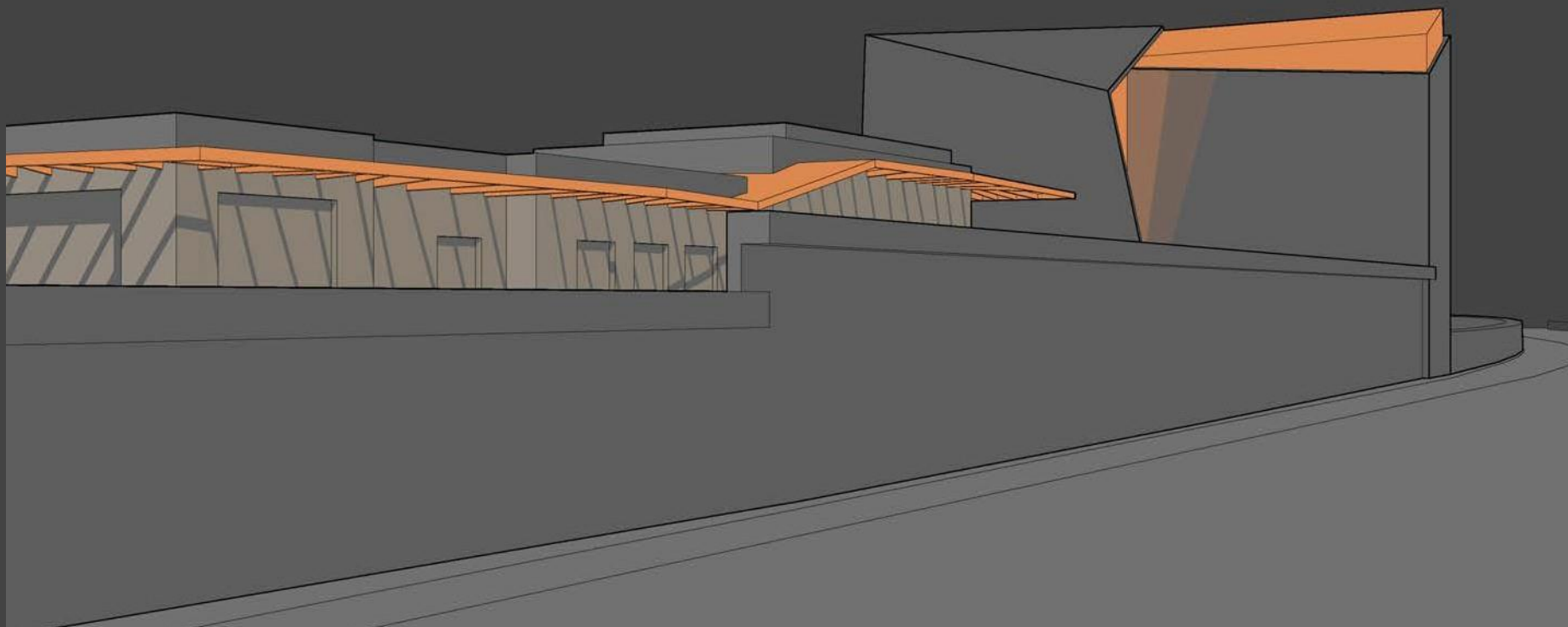
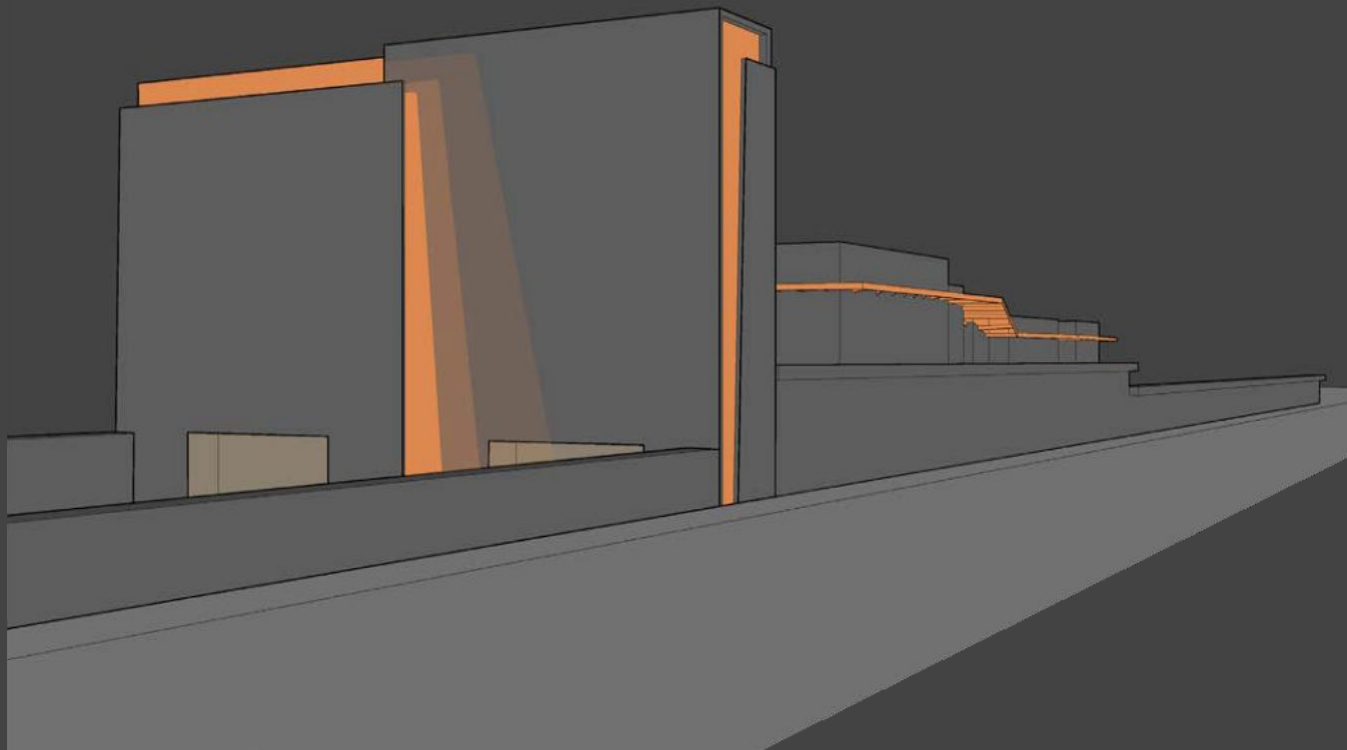






temporality





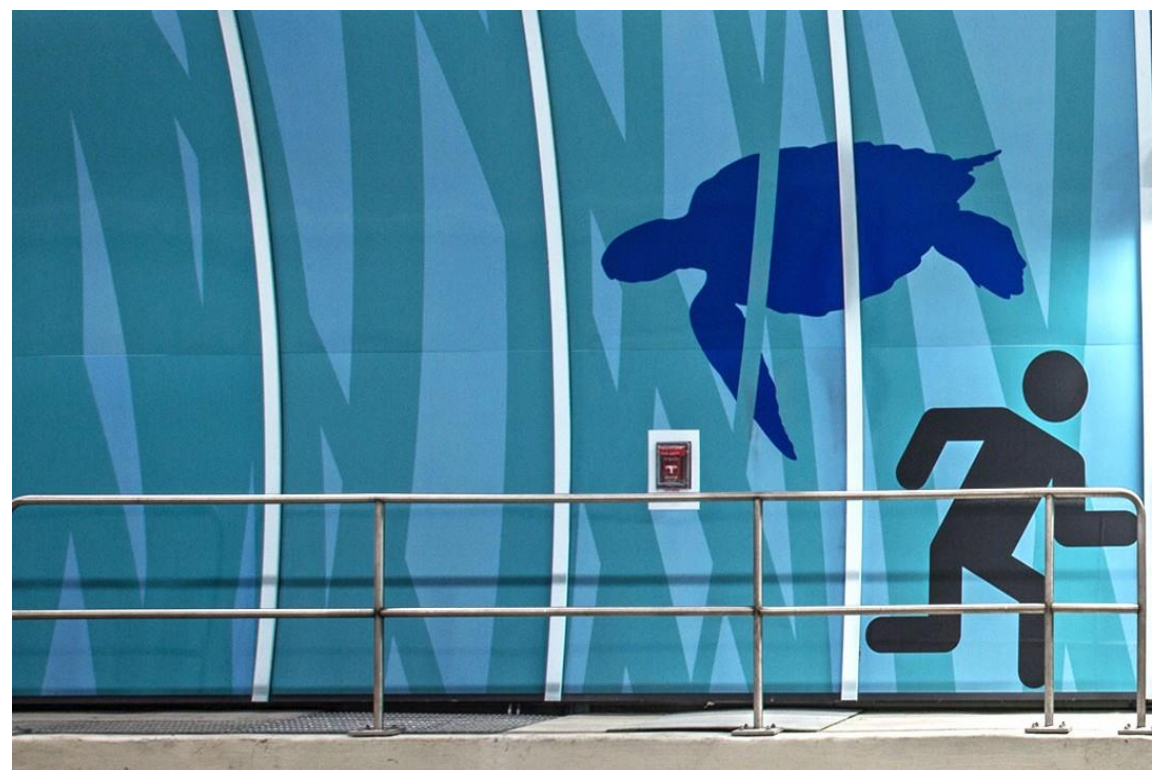






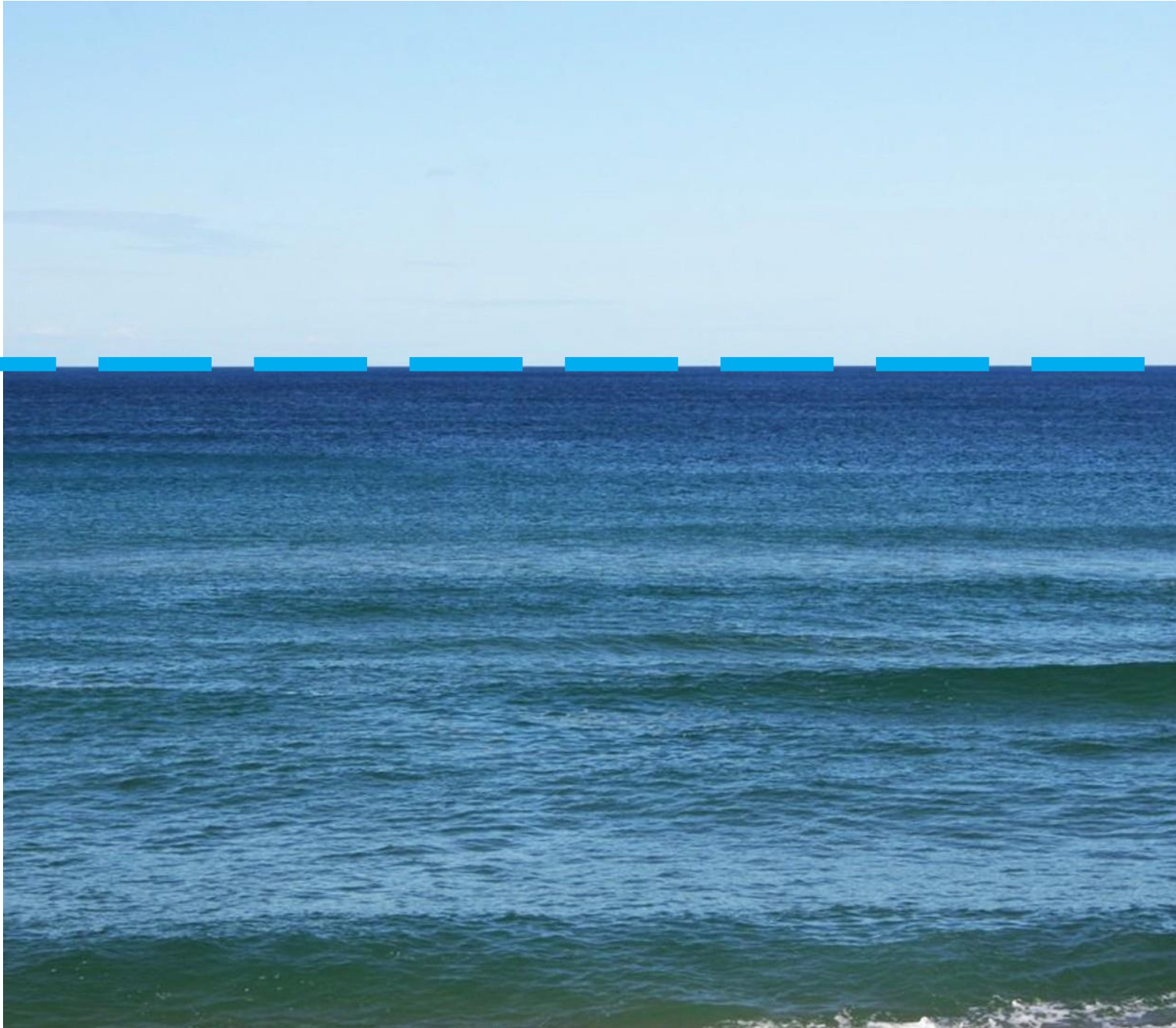


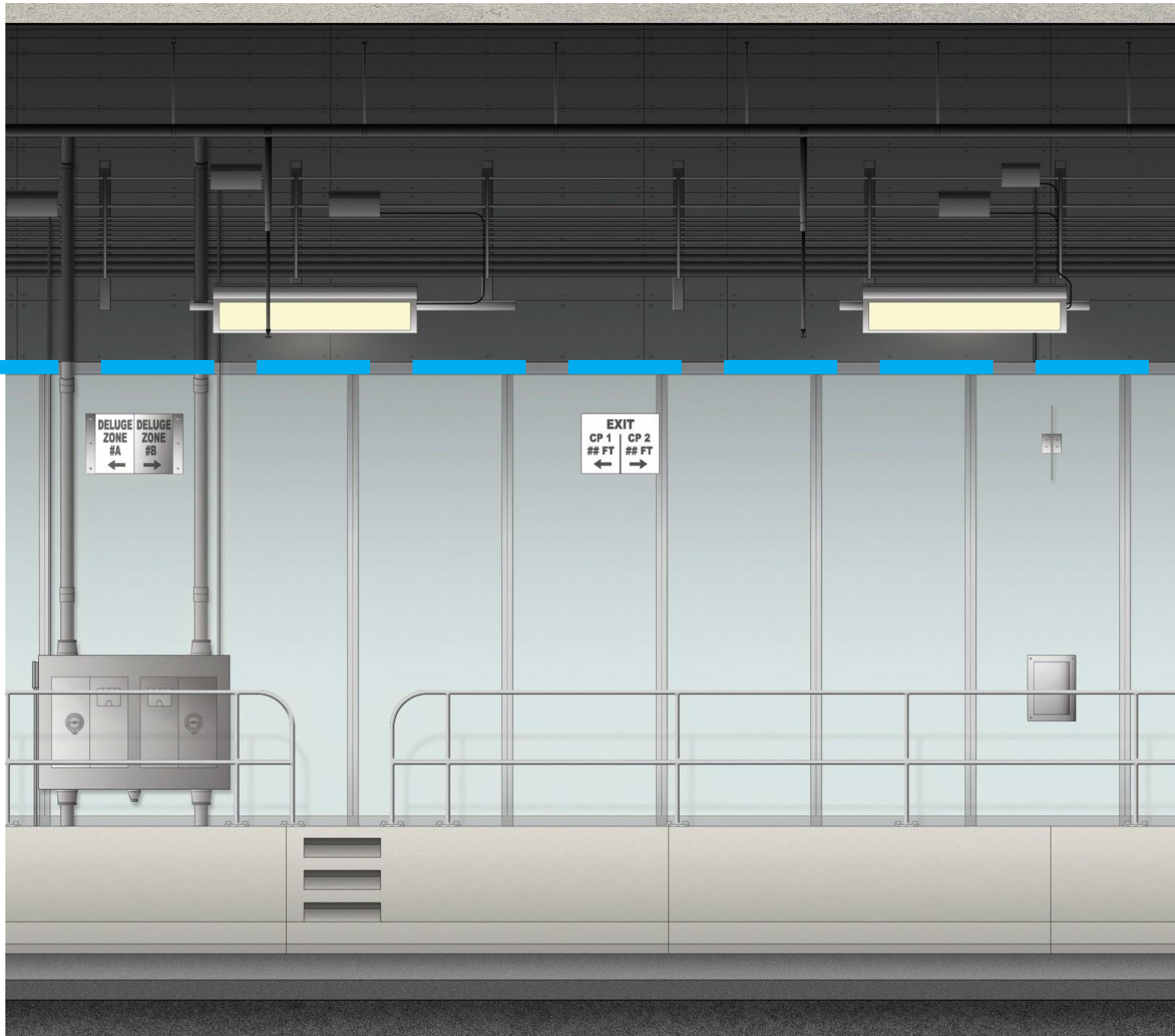






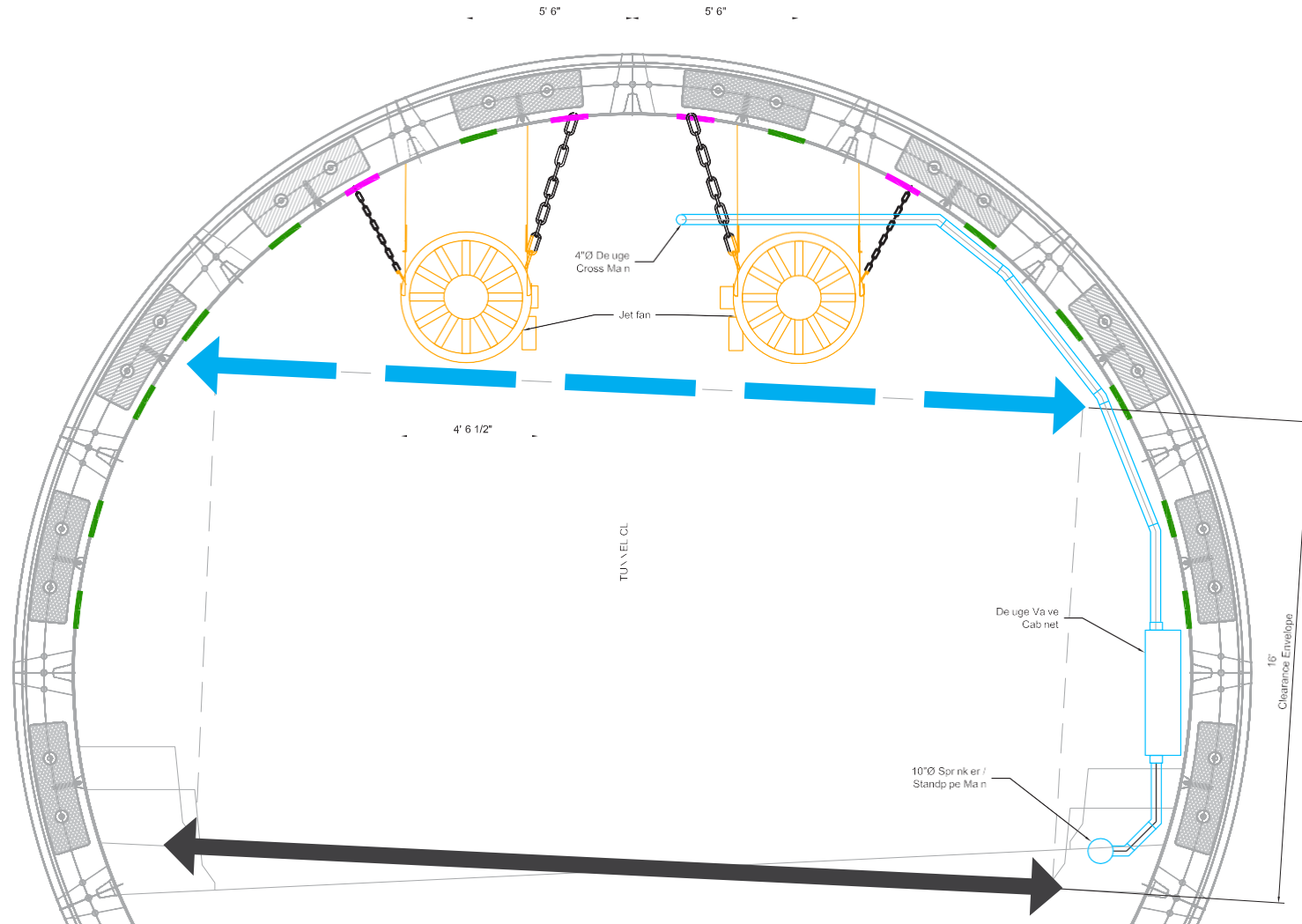
horizontal reference







**JET FAN
Tunnel section**
Scale: 1" = 4' @ 11"x17"



GENERAL NOTE

Proposed location for fixing
Allowed location for fixing

REVISIONS
DESCRIPTION
03/23/11 01: ADD'D DIMENSIONS
09/30/11 02: MFP UPDATE
03/22/12 03: UPDATE EQUIPMENT
03/28/12 04: GENERAL UPDATE



FLORIDA
PONT-BF-DW-9700-00003-04-MET MAR 28, 2012

PREPARED BY: S.A. US:
CHECKED BY: JAV
C.P.
APPROVED BY: JPC

FOR REVIEW

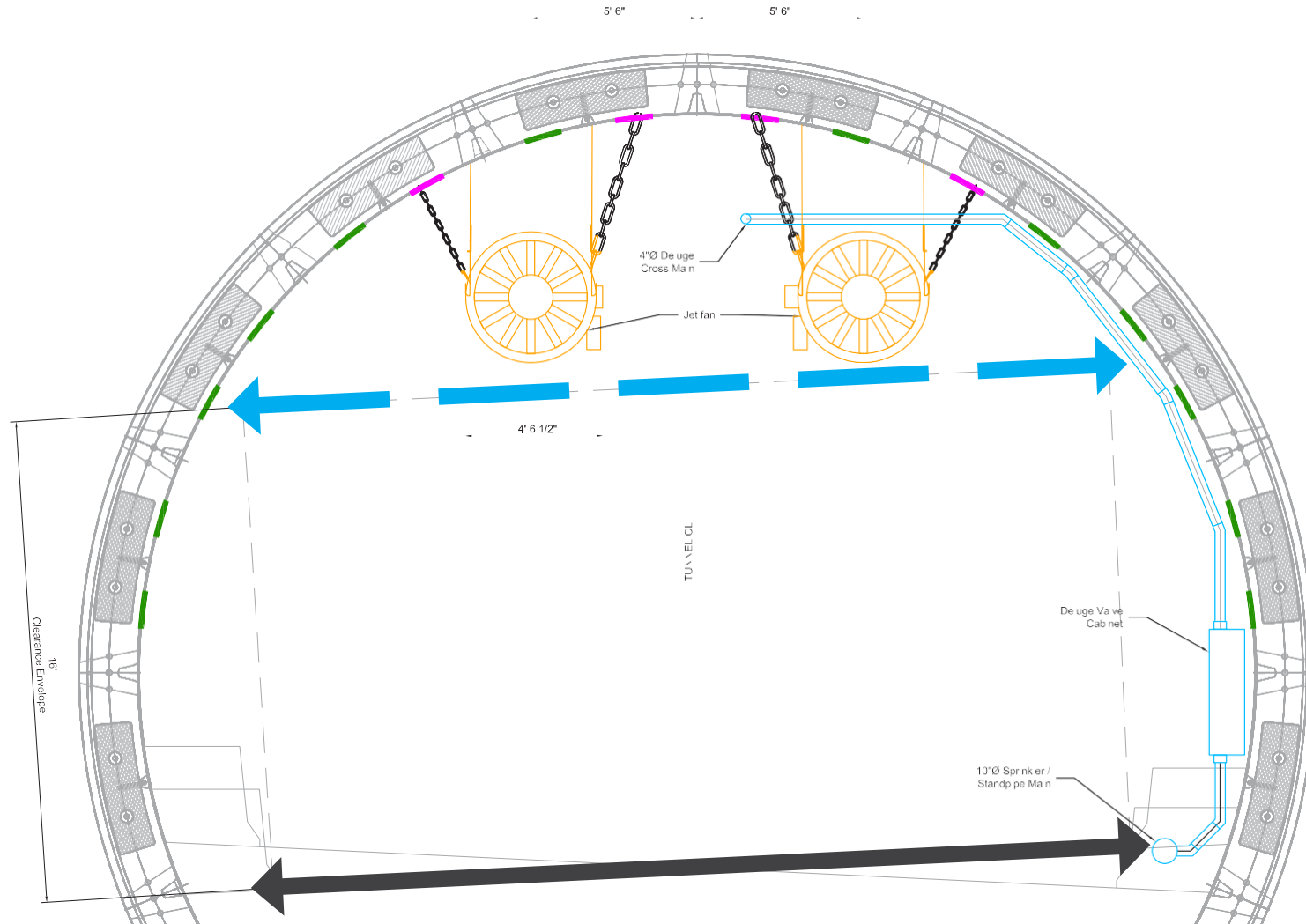
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
ROAD NO. COUNTY FINANCIAL PROJECT ID
A1A MIAMI DADT 251156 3 52 01

PORT OF MIAMI TUNNEL PROJECT
IBM TUNNEL
MFP UTILITIES
TYPICAL SECTIONS

SHEET
NO.

1 OF 7

**JET FAN
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PREPARED BY: S A US:
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PORT OF MIAMI TUNNEL PROJECT
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TYPICAL SECTIONS

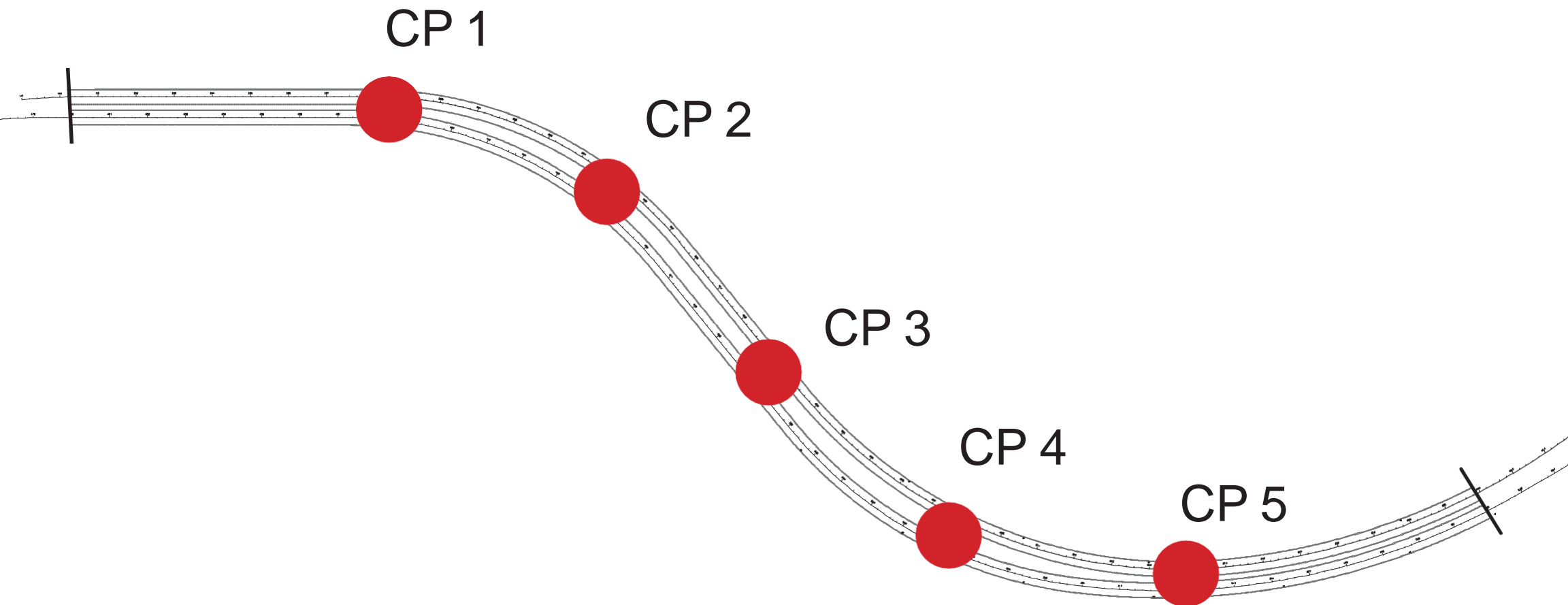
SHEET
NO.

1 OF 7



laying out the story board





CP - 1
WATSON >> DODGE



CP - 2
WATSON >> DODGE



CP - 3
WATSON >> DODGE



CP - 4
WATSON >> DODGE



CP - 5
WATSON >> DODGE



CP - 5
DODGE >> WATSON



CP - 4
DODGE >> WATSON



CP - 3
DODGE >> WATSON



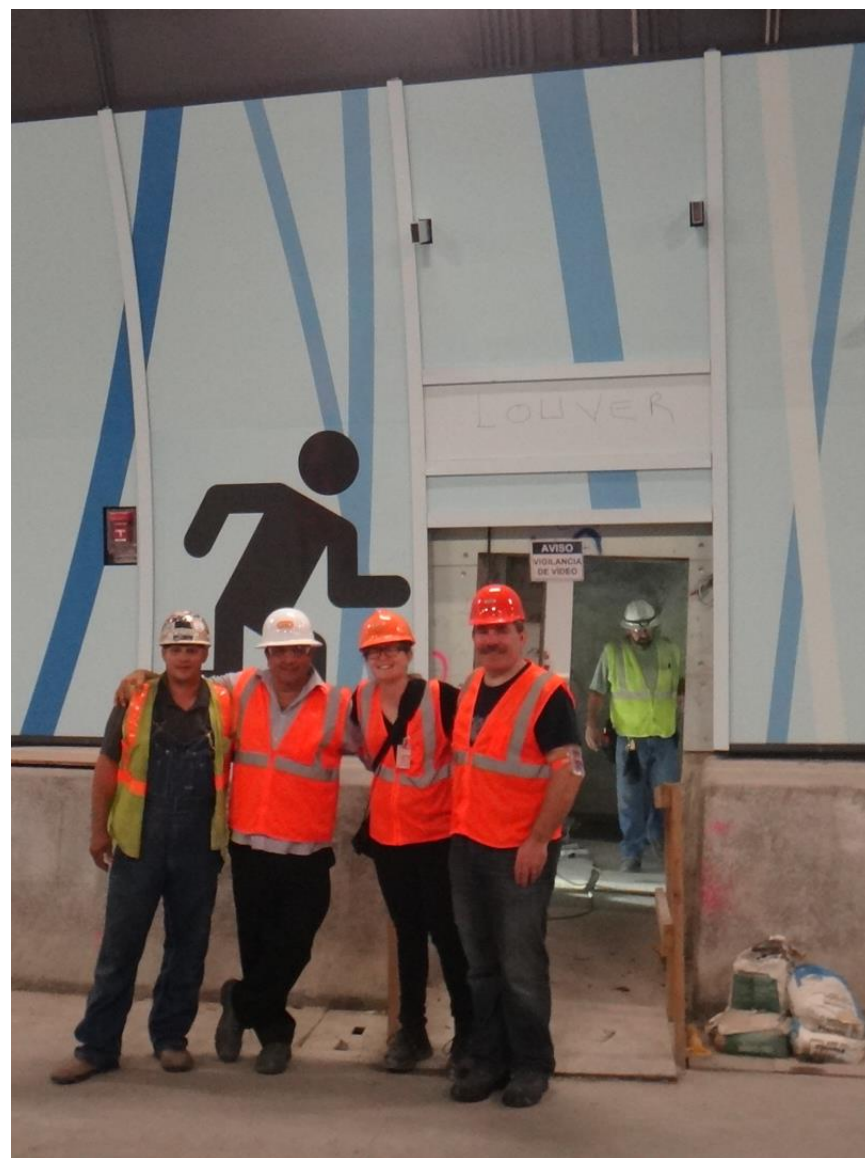
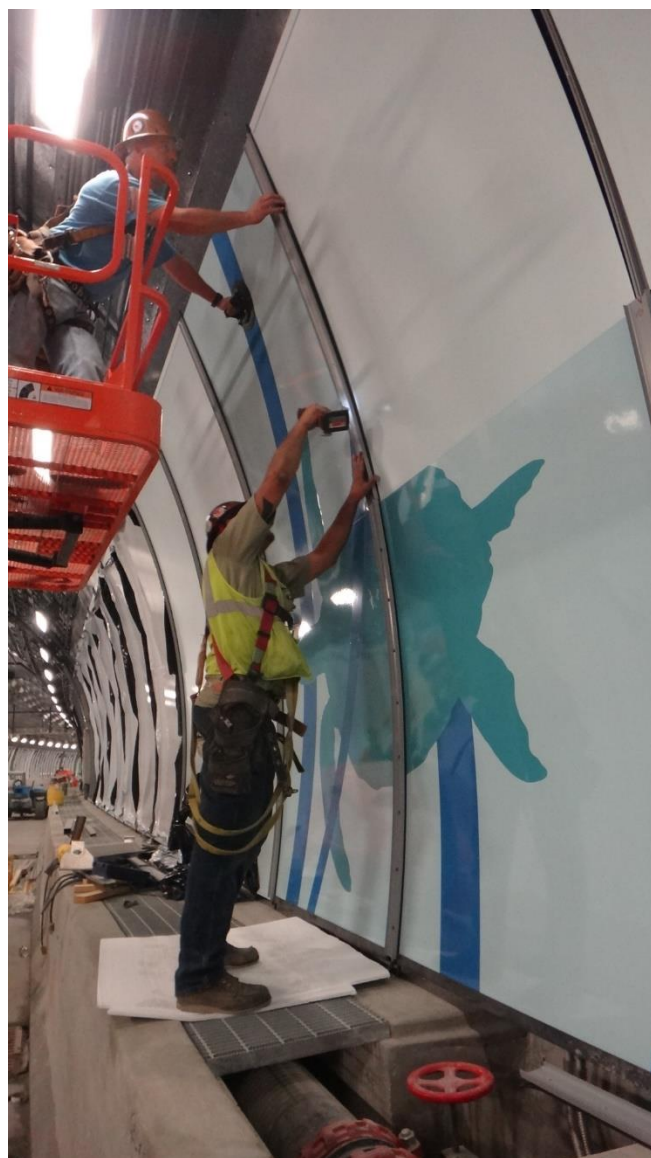
CP - 2
DODGE >> WATSON



CP - 1
DODGE >> WATSON











civic infrastructure



Rome 1762

Trevi Fountain

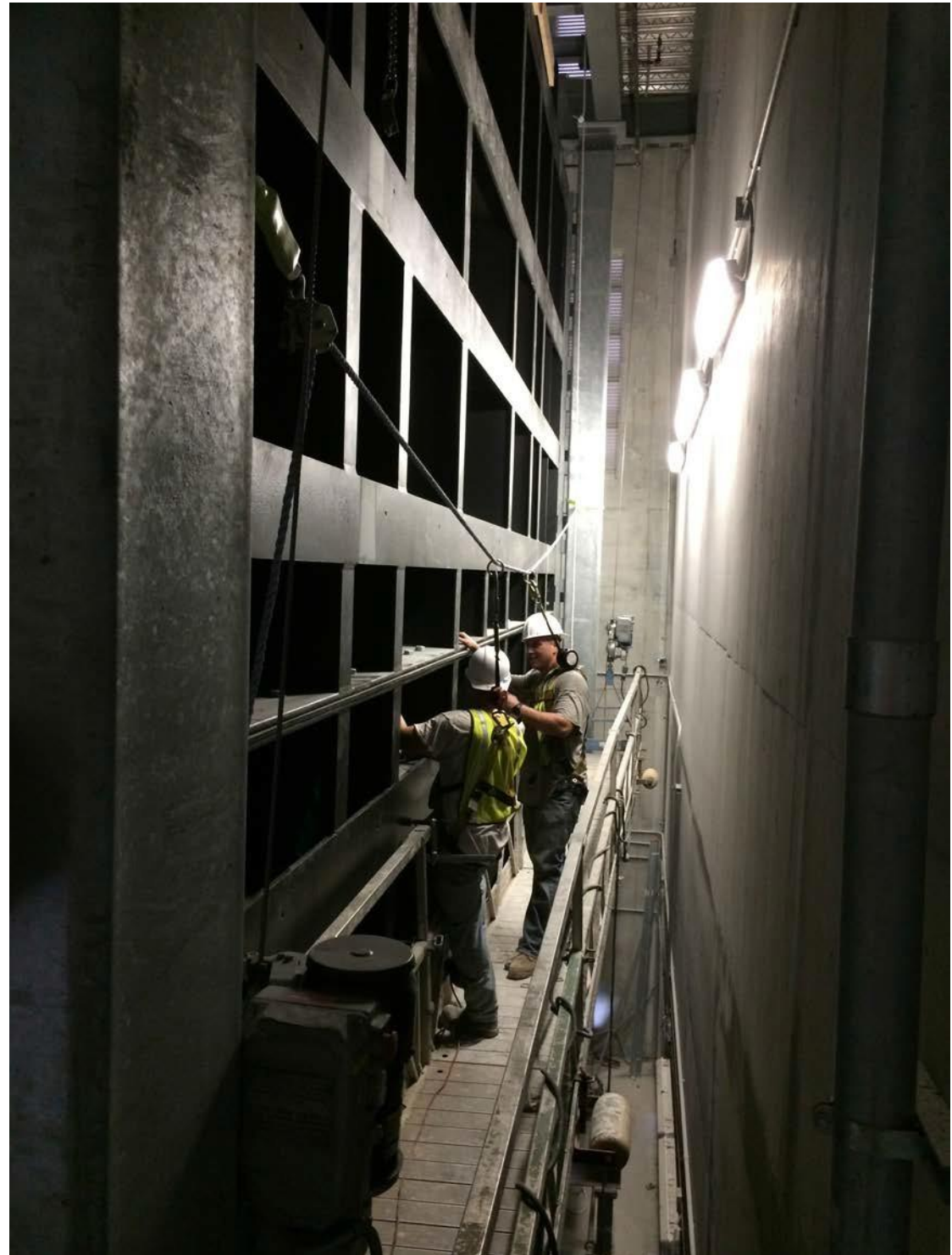


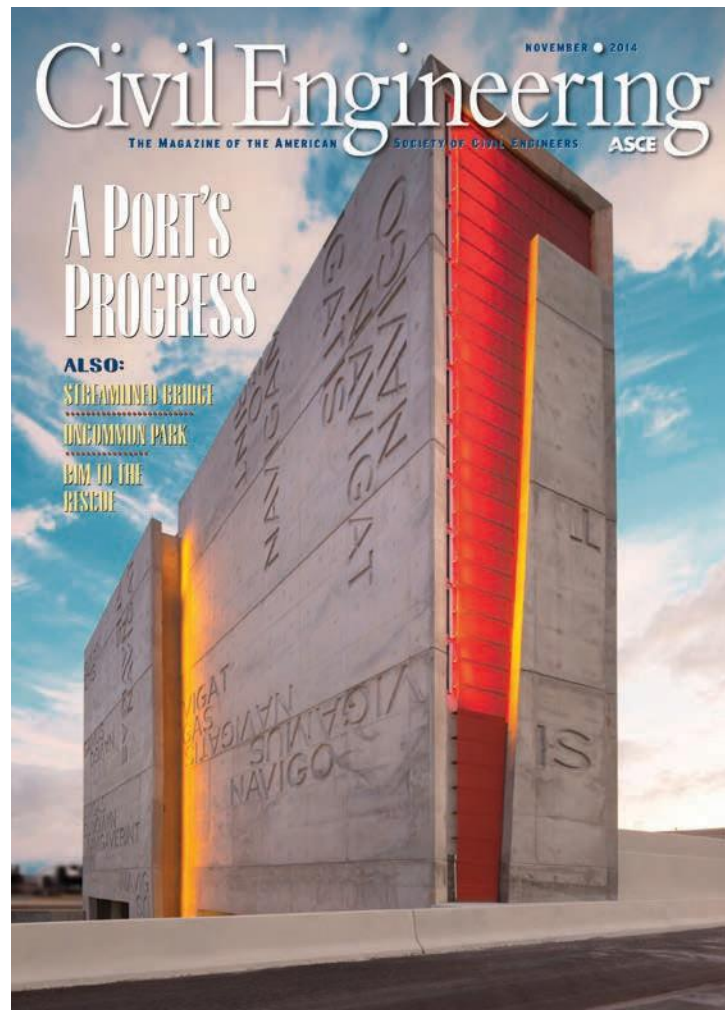
1960



Florida 1907

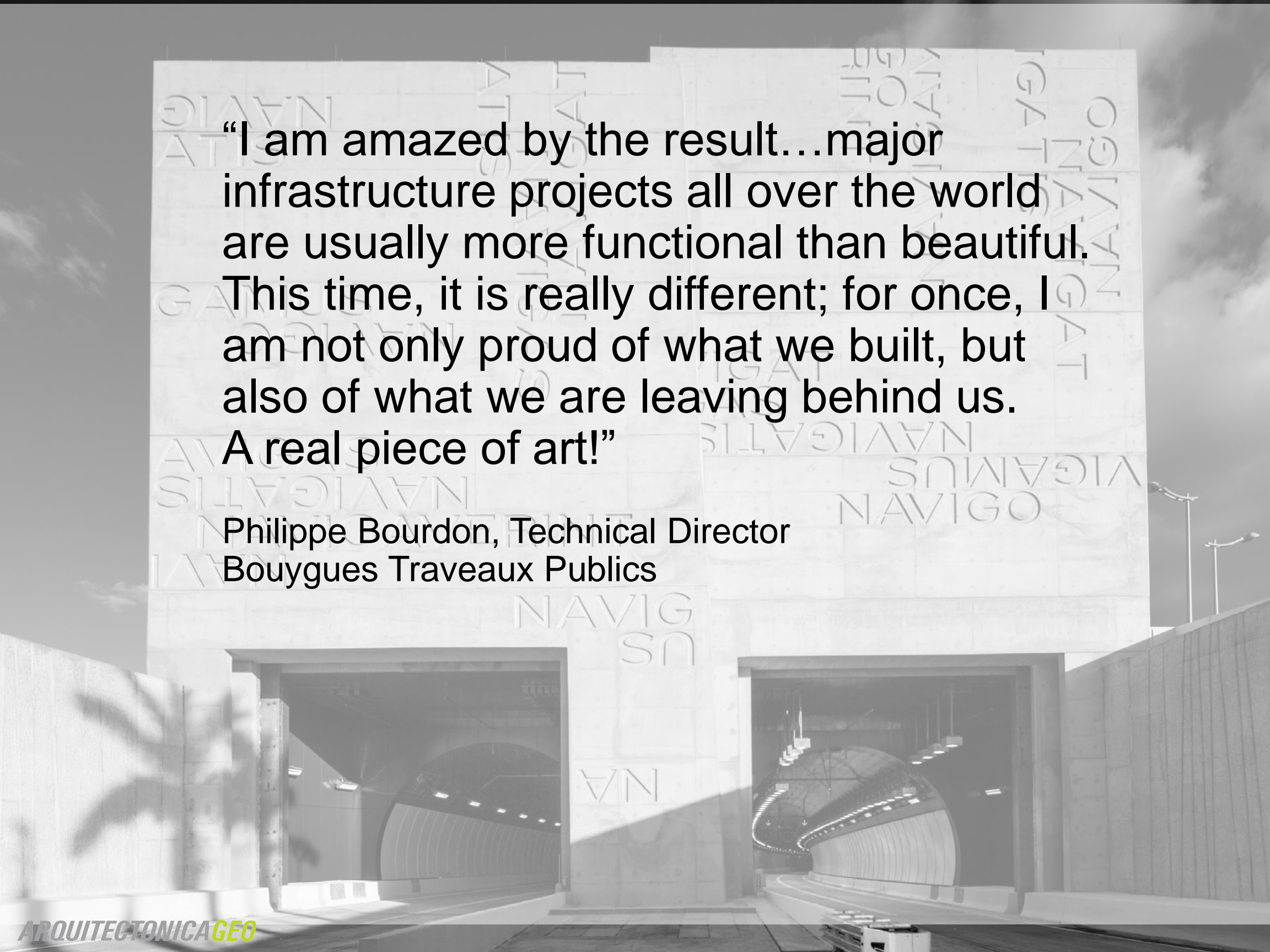
Florida East Coast Railway







Barack Obama March 29, 2013



“I am amazed by the result...major infrastructure projects all over the world are usually more functional than beautiful. This time, it is really different; for once, I am not only proud of what we built, but also of what we are leaving behind us. A real piece of art!”

Philippe Bourdon, Technical Director
Bouygues Travaux Publics

WHAT IS THE TUNNEL?
WHO IS IT FOR?
WHAT WAS OUR ROLE?
WHO WERE OUR PARTNERS?

Project Partners:

Public Sponsors:

MAT Concessionaire, LLC
Florida Department of Transportation (FDOT)
Miami-Dade County
City of Miami

Private Sponsors:

Meridian Infrastructure Finance

Federal Support:

US Department of Transportation
Transportation Infrastructure Finance (TIFIA)

Team:

Construction Project Manager: CSA Group

Public Information Specialist: Stantec Consulting

Owner's Representative: Parsons Brinckerhoff

Construction Engineering & Inspection (CEI) Team: Parsons Brinckerhoff

Florida Department of Transportation (FDOT)

Concessionnaire: MAT Concessionnaire, LLC

Design-Build Contractor: Bouygues Civil Works Florida

Tunnel Operator / Maintenance: Transfield Services Industry

Architect of Record: AECOM

Landscape Architect of Record: Laura Llerena & Associates, Inc.

Design Architect: Arquitectonica

Design Landscape Architect: ArquitectonicaGEO

Structural Engineer: AECOM

MEP Engineer: AECOM

Intelligent Transportation Systems: AECOM

Utility Relocation: AECOM

Highway Lighting: AECOM

Civil Engineer: Jacobs Engineering Group Inc.

General Contractor: Bouygues Civil Works Florida

Landscape Contractor: Superior Landscaping & Lawn Service, Inc.

Enameled Steel Graphic Panels: Winsor Fireform

Steel Mesh Panels: George's Welding Services, Inc.

Lighting: Lux Populi



PortMiami Tunnel

Communicating the PLACE and PROCESS while enhancing
the ACT of navigation

